

THE REVOLUTION IN MILITARY AFFAIRS:
IMPACT ON THE U.S. ARMY PERSONNEL SYSTEM

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We trained hard, but it seemed that every time we were beginning to form up into teams we would be reorganized. I was to learn later in life that we tend to meet any new situation by reorganizing. What a wonderful method it can be for creating the illusion of progress while producing confusion, inefficiency, and demoralization.

Petronius Arbiter, 210 B.C.

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ABBREVIATIONS

AAFES	Army and Air Force Exchange System
AAN	Army After Next
AC	Active Component
ACPERS	Army Civilian Personnel System
ACR	Armored Cavalry Regiment
AFV	Armored Fighting Vehicle
AG	Adjutant General
AGS	Armored Gun System
AH-64	Apache helicopter gunship
AIFA	AAFES Imprest Fund Activities
ARC	American Red Cross
ARNG	Army National Guard
BCT	brigade Combat Team
BDA	Battle Damage Assessment
BR	Battle Roster
BSA	Brigade Support Area
BUR	Bottom Up Review
CBT	combat (combat trains)
CEO	Chief Executive Officer
COMSEC	Communications Security
COMPUSEC	Computer Security
CONUS	Continental United States

CRC	CONUS Replacement Center
CYW	Cybernetic Warfare
C2SRS	Command and Control Strength Reporting System
C4I	Command, Control, Communications, Computers, and Intelligence
DA	Department of the Army
DBA	Dominant Battlespace Awareness
DeCA	Defense Commissary Agency
DEERS	Defense Enrollment Eligibility Reporting System
DCSPER	Deputy Chief of Staff, Personnel
DISCOM	Division Support Command
DIVARTY	Division Artillery
DNA	deoxyribonucleic acid
DoD	Department of Defense
DS	Direct Support
DSA	Division Support Area
EDAS	Enlisted Distribution and Assignment System
EMF	Enlisted Master File
EPW	Enemy Prisoner of War
FAST	Forward Area Support Teams
FCS	Future Combat System
FLD	field (field trains)
FM	Field Manual; also: frequency modulation for radio systems
FSB	Forward Support Battalion

FWD	forward
FY	Fiscal Year
GPS	Global Positioning System
GS	General Support
HCP	Health and Comfort Packs
HHC	Headquarters and Headquarters Company
HQ	Headquarters
HQDA	Headquarters Department of the Army
ISR	Intelligence collection, Surveillance and Reconnaissance
IW	Information Warfare
JRVIO	Joint Reserve Virtual Information Operations/information assurance organization
JTF	Joint Task Force
JUMPS	Joint Uniform Military Pays System
KIA	Killed In Action
LAV	Light Armored Vehicle
LSA	Logistics Support Area
MACOM	Major Army Command
MIA	Missing In Action
MLRS	Multiple Launch Rocket System
MOOTW	Military Operations Other Than War
MOS	Military Occupational Specialty
MPRJ	Military Personnel Records Jacket

MSB	Main Support Battalion
MSE	Mobile Subscriber Equipment
MTR	Military-Technical Revolution
MTW	Major Theater War
MWR	Morale, Welfare, and Recreation
M1A1/2	Abrams tank
M2/3A2	Bradley fighting vehicle
NATO	North Atlantic Treaty Organization
NBC	Nuclear, Biological, Chemical
NCO	Non-Commissioned Officer
NMD	National Missile Defense
OCIE	Organizational Clothing and Individual Equipment
OCONUS	Outside Continental United States
OMPF	Official Military Personnel File
OOTW	Operation Other Than War (term generally replaced by MOOTW)
OPMS XXI	Officer Personnel Management System XXI
PASR	Personnel Accounting and Strength Reporting
PD	Personnel Detachment
PERSCOM	Personnel Command
PMC	Personnel Management Center
POD	Port of Debarkation
POM	Preparation for Overseas Movement
PRB	Personnel Replacement Battalion

PRR	Personnel Requirements Report
PS	Personnel Summary
PSB	Personnel Services Battalion
QDR	Quadrennial Defense Review
RC	Reserve Component
RMA	Revolution in Military Affairs
RTD	Return to Duty
SIDPERS	Standard Installation Division Personnel System
SINCGARS	Single Channel Ground and Airborne Radio System
SRP Readiness	Soldier Readiness Packet; Soldier Readiness Program; Soldier Processing
S1 (or G1, or J1)	staff officer position: Adjutant, or personnel staff officer
S2 (or G2, or J2)	staff officer position: Intelligence Officer
S3 (or G3, or J3)	staff officer position: Operations and Training Officer
S4 (or G4, or J4)	staff officer position: Supply Officer
S5 (or G5, or J5)	staff officer position: Civil-Military Operations Staff Officer
TAACOM	Theater Army Area Command
TACCS	Tactical Army Combat Service Support Computer System
TAPDB	Total Army Personnel Data Base
TFE	Tactical Field Exchange
TIW	Transnational Infrastructure Warfare
TOPMIS	Total Officer Personnel Management Information System
UAV	Unmanned Aerial Vehicle

UH-60	Blackhawk Army utility helicopter
USACOM	United States Atlantic Command
USAR	United States Army Reserves
USAREUR	United States Army Europe
USCENTCOM	United States Central Command
USEUCOM	United States European Command
USFK/CFC	United States Forces Korea Combined Forces Command
USO	United Service Organization
USTA PERSCOM	United States Army Total Army Personnel Command
WIA	Wounded In Action
WMD	Weapons of Mass Destruction

CHAPTER 1

Introduction

The conduct and outcome of war is never assured. As often quoted, Carl von Clausewitz lamented that “war is the realm of uncertainty; three quarters of the factors on which action in war is based are wrapped in a fog of greater or lesser uncertainty.”¹ The fog of war impacts every aspect of military planning. During the past decade, one of the major concerns traveling through military circles is the belief that we are in the midst of a revolution in military affairs (RMA). Some military planners hope that technical and other advances brought about by the RMA can lift some of this “fog of war.”

Many scholars point to the use of precision-guided munitions in the Gulf War and in the bombing campaigns of Operation Allied Force in Kosovo as proof positive of the existence of a new revolution in military affairs. However, all do not agree about this being a revolutionary step. Some claim that these advances are merely an evolutionary, and not revolutionary, step in the conduct of war. Most of the weapons and the Airland Battle Doctrine used in the conduct of these operations were around for a decade or more prior. Even of those who believe that the United States is in the beginning of and RMA may somewhat disagree over how to exactly define this revolution in military affairs. Is the advance in technology enough to comprise the revolution, or does it require more?

¹ Carl von Clausewitz, *On War*, eds. And trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1984), 101.

In this paper, I will address what I believe to be the most all-inclusive definition of the RMA. I will then look at some possible impacts on the organization of the U.S. Army necessitated by this RMA. Changes in Army organization, along with the technological advances of the RMA, will necessitate changes in personnel support to the Army. I will discuss some of these impacts, propose some possible changes to personnel support functions and also some structural changes to personnel organizations. However, the first step is to come to a consensus on the definition of the revolution in military affairs.

The Revolution in Military Affairs

Soviet observers appear to have been the first to recognize the emergence of the current revolution in military affairs. In the 1980s, Marshall Nikolai Ogarkov (1917-1994),² the Chief of Soviet General Staff, advanced the idea of an imminent "military-technical revolution."³ The Soviets viewed the revolution in a very narrow focus, believing that advances in precision weaponry would make conventional weapons as effective as small tactical nuclear devices.⁴ However, most now agree that this definition requires expansion. Technology, by its very nature, has limitations. "Military history suggests that technological

² Stephen J. Blank, "Preparing for the Next War: Reflections on the Revolution in Military Affairs," in *In Athena's Camp: Preparing for Conflict in the Information Age*, ed. John Arquilla and David Ronfeldt (Santa Monica, CA: Rand, 1997), 67.

³ Elliot A. Cohen, "A Revolution in Warfare," *Foreign Affairs* 75, no. 2 (March/April 1996): 37.

⁴ *Ibid*, 39.

advantage is rather transitory in nature, readily copied, and countered.”⁵ There must be more involved in an RMA than just technological advances.

One of the major proponents of the approaching revolution in military affairs is Andrew Marshall, the Director of the Office of Net Assessments in the Office of the Secretary of Defense. Marshall describes a RMA as “a major change in the nature of warfare brought about by the innovative application of new technologies which, combined with dramatic changes in military doctrine and operational and organizational concepts, fundamentally alters the character and conduct of military operations.”⁶ From this definition, it is clear that it is not technology by itself that constitutes the RMA. Much more is needed for a truly revolutionary event.

According to this definition of RMA, we can see that military revolutions comprise four elements: “technological change, systems development, operational innovation, and organizational adaptation.”⁷ Technology alone does not constitute a military revolution. A true RMA requires each of these four elements. Figure 1 graphically depicts the elements of a RMA.

By Marshall’s, and most every other definition, technological advances alone do not produce a revolution in military affairs. While technology may be a key component, it is not the only element necessary for truly revolutionary advances. It is only when the armed forces combine these technological advances with doctrinal and organizational changes to maximize the benefits of the new technologies that a RMA is fully realized. Military

⁵ Douglas A. Macgregor, *Breaking the Phalanx* (Westport, CT: Praeger Publishers, 1997), 52.

⁶ Jeffrey McKittrick and others, “Chapter 3: The Revolution in Military Affairs,” September 12, 2000 <<http://www.airpower.maxwell.af.mil/airchronicles/battle/chp3.html>>, 1.

⁷ Andrew F. Krepinevich, “Cavalry to Computer: The Pattern of Military Revolutions,” *The National Interest* (Fall 1994): 30.

establishments fully realize a RMA only when all of these factors mesh together “to attain qualitatively superior fighting power as well as dramatic positional advantages in time and space which the enemy’s countermeasures cannot defeat.”⁸

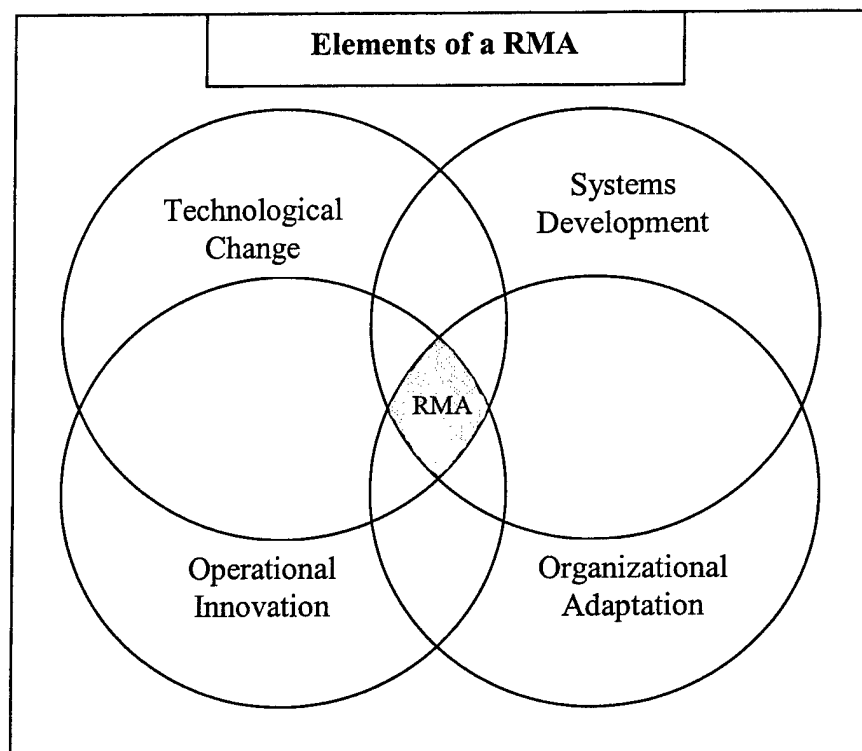


Fig. 1. The elements of a revolution in military affairs.

Because of the complexities involved, military revolutions tend to be big events. They occur infrequently and take a long period of time to develop, perhaps several decades.⁹ The current RMA, if it does exist, is not the first revolution in military affairs. There are

⁸ Macgregor, 143.

⁹ James R. Blaker, “Understanding the Revolution in Military Affairs: A Guide to America’s 21st Century Defense: Progressive Policy Institute Defense Working Paper No. 3,” ed. Robert A. Manning (Washington, DC: Progressive Policy Institute, January 1997), 6.

many historical examples of military revolutions. By reviewing some of these past RMAs, these historical examples may show some commonalities as to composition. I will briefly mention some of the past military revolutions pertaining to ground conflict, although these have not been the only forms of military revolutions.

The Hundred Years War, beginning in 1337 and ending in 1453, spawned two military revolutions.¹⁰ The first was the Infantry Revolution, in which the infantry replaced the heavy cavalry as the dominant factor on the battlefield. During this revolution, the “infantry – in the form of Swiss pikemen and English archers – emerged as a combat arm fully capable of winning battles.”¹¹ The development of the longbow had much to do with the onset of this particular revolution. With the longbow, archers could penetrate the armor of the cavalymen. Of additional benefit was the fact that it was cheaper the arm and train archers than men-at-arms. This allowed states to muster larger armies at a cheaper cost.

The Artillery Revolution quickly followed the Infantry Revolution during the Hundred Years War. This revolution was brought about by several technological improvements, namely the lengthening of gun barrels, metallurgical breakthroughs and the “corning” of gunpowder.¹² The process of “corning” is the mixing of wet gunpowder and allowing it to dry. The corning process makes it three times as powerful as sifted powder, and also has the added benefit of being less expensive.¹³ But, unlike the Infantry Revolution, the Artillery Revolution was very expensive to exploit. This allowed more prosperous states to subdue their weaker neighbors. This revolution also drove changes in

¹⁰ Krepinevich, 31.

¹¹ Ibid.

¹² Ibid, 32.

¹³ Ibid.

doctrine and military organizations. Castles no longer could provide protection from artillery bombardments, so warfare moved into the open country.¹⁴

Partly in response to the Artillery Revolution, the sixteenth century witnessed the arrival of the Fortress Revolution.¹⁵ Fortress walls were lower and thicker, making them almost impervious to artillery. However, this revolution was also very expensive. Its application was also somewhat limited. Relying solely on defensive operations will not win a war, they can only keep a state from losing one. The requirement for offensive operations once again led to the rise of the infantry as artillery and muskets improved.

Another historical example of a land-based RMA is the Napoleonic Revolution of the early 1800s. The Industrial Revolution brought about interchangeable parts, the standardization of calibers of weapons, and the standardization of equipment. Conscription also provided the French with a very large army, or *leve'e en masse*.¹⁶ The Napoleonic Revolution also gave rise to a new form of organization, the corps, which transformed logistics and tactics.¹⁷ This period in history also witnessed the development of the division, a self-sufficient military organization. Napoleon also developed an effective staff system to provide command and control for these organizations. Therefore, Napoleon's true genius was the fact that he integrated advances in technology, military systems, and organizational changes to produce a dramatic leap in military capabilities.¹⁸

¹⁴ Ibid.

¹⁵ Ibid, 33.

¹⁶ Ibid, 34.

¹⁷ Center for Strategic and Budgetary Assessments (CSBA), "What is a Military Revolution?" September 11, 2000 <<http://www.csbahome.com/rma%20main.htm>>, 1.

¹⁸ Krepinevich, 34.

The passing of a half-century brought the Land Warfare Revolution, as witnessed by the Civil War in the United States.¹⁹ Some military historians also refer to this as the Railroad, Rifle, and Telegraph Revolution.²⁰ Railroads greatly improved mobility, and the telegraph greatly improved communications. The rifling of barrels also greatly improved the range and accuracy of artillery and muskets. The combination of all of these factors revolutionized land warfare. Unfortunately, doctrine, tactics, and military organizations did not keep pace with the improvements in technology. Union and Confederate leaders relied mainly on Napoleonic era tactics, leading to fearful losses on the battlefield. The First World War, more than fifty years later, proved that all the lessons were not fully capitalized from this military revolution for many years to follow.

The 1940s witnessed the effects of the Interwar Revolutions in Mechanization, Aviation, and Information.²¹ Vast improvements in technology occurred during this period. There were vast improvements in the internal combustion engine, aircraft design, radio, and in the development of radar systems.²² The impact was most notable in the military capabilities of Germany.

Most of the world was shocked by the effectiveness of the German *blitzkrieg* in the early stages of the Second World War. It was not that the Germans had better equipment than their adversaries, but it was the way in which they employed and combined their tanks, infantry, artillery and aircraft into combined-arms warfare. They were able to coordinate all

¹⁹ Ibid.

²⁰ Center for Strategic and Budgetary Assessments (CSBA), 1.

²¹ Krepinevich, 36.

²² Ibid.

arms of the military into an effective, highly mobile fighting force. It was tactics, not technology, which made the biggest difference in the effectiveness of the Germans.

The Nuclear Revolution emerged after the end of the Second World War.²³ Especially important in this revolution was the placement of nuclear warheads on ballistic missiles. It was not only the existence of the warheads themselves, but in having an effective delivery system that truly brought on this revolution. For the first time in history, nuclear weapons brought about the very real possibility of complete, global destruction. In the end, the only utility for nuclear weapons was in deterring war, not in fighting one.²⁴

While this is not an exhaustive list of previous military revolutions, it does provide examples of some of the basic types of RMAs. There are three types of RMAs. The first type of military revolution is the form “driven by fundamental scientific or technical inventions or developments” in military technology.²⁵ This type of RMA is the one that tends to dominate people’s understanding, but they are the least frequently occurring. Examples of this type include the gunpowder and nuclear revolutions.

The second type of military revolution is the type driven by “operational and organizational innovation to redress a strategic problem.”²⁶ The German *blitzkrieg* is the best illustration of this type of RMA. Tactics, not technology is key in this type of revolution. Since this type of RMA is not as dependent on technology, it is less impacted by the lengthy

²³ Ibid.

²⁴ Center for Strategic and Budgetary Assessments (CSBA), 2.

²⁵ Jeffrey R. Cooper, “Another View of the Revolution in Military Affairs,” in *In Athena’s Camp: Preparing for Conflict in the Information Age*, ed. John Arquilla and David Ronfeldt (Santa Monica, CA: Rand, 1997), 117.

²⁶ Ibid.

timelines involved research and development, as well as acquisition cycles. Such revolutions are most beneficial for use in the short-term and mid-term situations.

The third type of military revolution is “driven by fundamental economic, political, and social changes outside the immediate military domain.”²⁷ The Napoleonic Revolution is the classic example of this type of RMA. The industrial revolution was a main driving factor in this military revolution. After reviewing the elements, examples, and types of military revolutions, some scholars look at the current trends in the military and wonder what type of RMA we are experiencing now.

Viewed at the beginning of the current military revolution, it is not entirely clear as to which one of these types of RMAs it clearly falls into. However, I would tend to place it into the first category of those driven by technological change. Much of the technological advances are occurring in the civilian sector, and the military is struggling to keep up and adapt to these improvements. Sweeping advances in computer technology and precision munitions are forcing changes to Army doctrine and structure. Technological changes appear to be the driving factor in this current revolution. With these technological advances, the Army can accomplish its mission with fewer numbers of soldiers, equipment, and hopefully casualties.

In spite of the possible advances and positive aspects, the current RMA is placing a fog over the United States armed forces, instead of serving to eliminate some of the fog of war. There are critical decisions to make concerning each of these four elements that comprise a RMA. Which paths of equipment development and technological innovations should the U.S. pursue? Is it the platform or the weapon itself that is most important? What

²⁷ Ibid, 118.

doctrine and tactics should the Army utilize in light of technological changes in weaponry? How should the Army organize its units? Predicting the future with any degree of certainty is impossible. The only thing that is certain is that there will be change.

Some scholars have entitled the current RMA as the “American RMA,” since no other country comes close to the advancements of the United States. While the U.S. lead may not always be secure, the U.S. will be in front for decades to come. Military analysts argue over the various benefits of first-move versus second-move strategies in a RMA. But, it appears as though the United States is not in a position to consider these possibilities. Since America is in the lead, it will determine the direction of the revolution for the foreseeable future. Other states must compete with American dominance, or find ways to counter it. But what, exactly, constitutes the American RMA?

The American RMA

Admiral Owens provided the best explanation of the American RMA in his description of a “system of systems.”²⁸ In Owens’ view, there are three main areas of the RMA. According to Owens, it is the synergy of these three arenas in which the real advances are made, the whole being much greater than the sum of its parts. Figure 2 depicts the RMA as described by Admiral Owens²⁹ and also by James Blaker.³⁰

²⁸ Bill Owens and Ed Offley, *Lifting the Fog of War* (New York: Farrar, Straus and Giroux, 2000), 99.

²⁹ Ibid.

³⁰ Blaker, “Understanding the Revolution in Military Affairs,” 10.

In Owens' "system of systems," the first arena is intelligence collection, surveillance and reconnaissance (ISR).³¹ This provides the commander information about the enemy and the battlefield, allowing him to "see" what the enemy is doing. Some term this ability as dominate battlespace awareness (DBA).³² Owens envisions satellites and advanced sensors providing enhanced information to American military leaders for a 200-by-200 mile area, an area of 40,000 square miles.³³ The U.S. military will have unequalled knowledge and understanding over the battlefield.

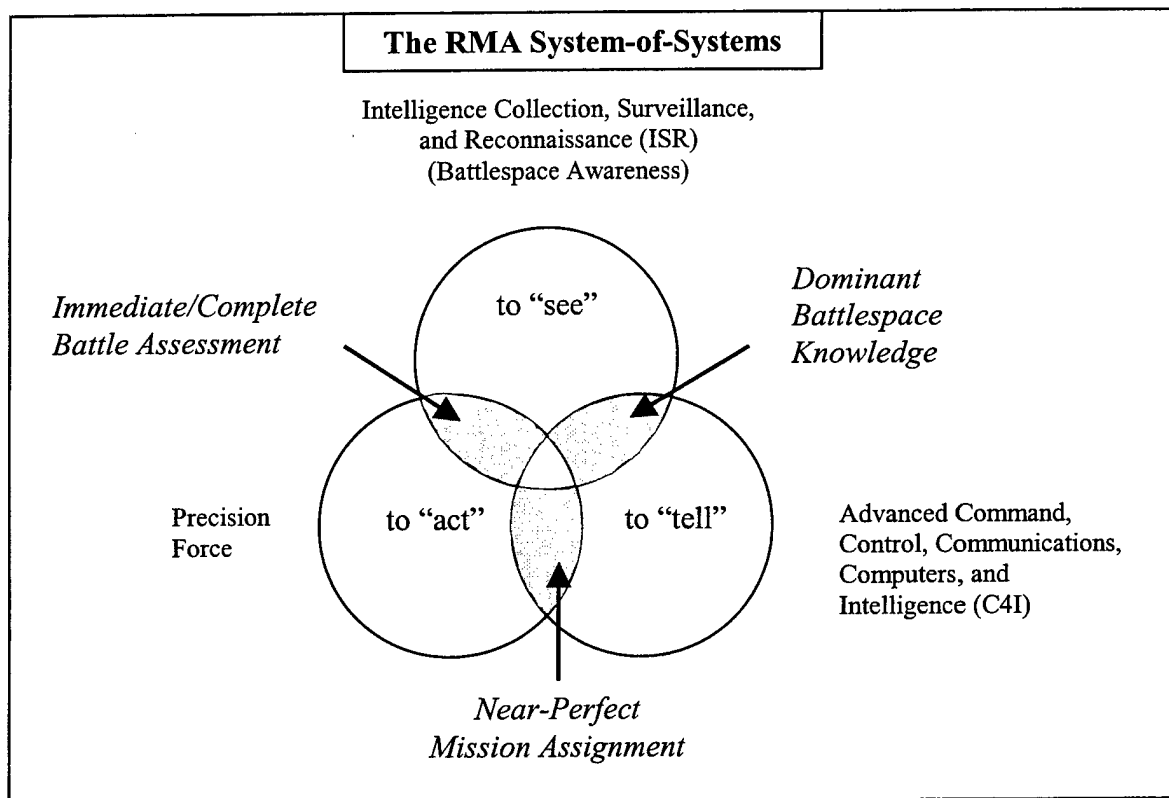


Fig. 2. Admiral Owens' system-of-systems view of the revolution in military affairs.

³¹ Owens and Offley, 99.

³² McKittrick et al, 11.

³³ Owens and Offley, 124.

The second arena is advanced command, control, communications, computers, and intelligence, also known as C4I.³⁴ This “enables the commander to transfer data and communicate quickly and effectively with his subordinate commanders even though they are dispersed across thousands of square miles.”³⁵ Commanders are then capable of coordinating operations more effectively, and even from a great distance away. Unrestricted, secure communications will be key in the coming RMA.

The third arena involves the use of precision force.³⁶ This is the use of precision-guided weapons to cause the greatest damage to the enemy. This allows the United States to act by attacking in depth, and striking the centers of gravity of the enemy. This gives the U.S. the unparalleled ability to hit the enemy where it hurts the most.

While all of these three arenas provide the military with advantages, it is in the synergy of the areas in which the advances become truly revolutionary. Where these arenas overlap is where the RMA creates the three conditions required for combat victory: “dominant battlespace knowledge, near-perfect mission assignment, and immediate/complete battlespace assessment.”³⁷ Together, these capabilities produce an “effect much greater than the sum of the components.”³⁸

Dominant battlespace knowledge arrives from the overall comprehension of the terrain and capabilities of the enemy, as well as communication and reporting system of friendly units. The synergy of these two areas provides the commander with an accurate,

³⁴ Ibid, 99.

³⁵ Ibid.

³⁶ Ibid, 100.

³⁷ Ibid.

³⁸ Ibid.

total picture of all relevant factors on the battlefield. The commander will know the capabilities and intentions of the enemy, and how to best counter the enemies actions.

Near-perfect mission assignment occurs once the military processes the data into pertinent information and the commander communicates it to the field units.³⁹ The communication process allows headquarters and combat units to determine dispositions and locations of friendly and enemy units. Combat commanders can then determine which units and weapons are best suited to carry out the mission, and then coordinate with them to carry out the attack.

Immediate and complete battle assessment occurs after the initial attack. Imagery from various reconnaissance platforms; such as aircraft, unmanned aerial vehicles (UAV) and satellites, and also reports from combat units, provides an accurate battle damage assessment (BDA). The commanders can then determine the success or failure of the attack, and determine if additional strikes are necessary. All of these factors acting in consort form what many military analysts are now calling the American RMA.

Others have a slightly differing view of the American RMA. Instead of a system of systems view, McKittrick and his fellow authors place the importance on areas of warfare versus the various systems of capabilities. They view the revolutionary impact as coming from an overall operational plan that involves an intersection of precision strike, information warfare, dominating maneuver, and space warfare.⁴⁰ Figure 3 shows these authors' view the elements of the American RMA.⁴¹

³⁹ Ibid, 101.

⁴⁰ McKittrick et al., 12.

⁴¹ Ibid, 13.

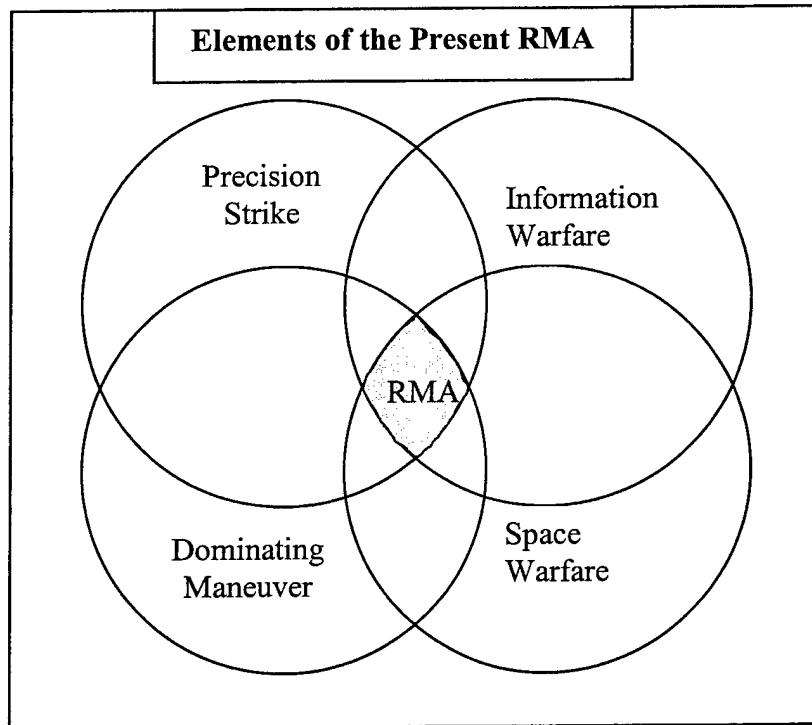


Fig. 3. The elements of the present revolution in military affairs as depicted by McKittrick, Blackwell, Littlepage, Kraus, Blanchfield, and Hill.

The Army generally recognizes that the three basic tasks of a soldier are to shoot, move, and communicate. Three of these areas line up with McKittrick's four elements of a RMA. The ability to shoot correlates with precision strike. The ability to move correlates with dominating maneuver. The ability to communicate correlates with information warfare. In my view, space warfare should not be included as a separate element, since it will be covered in advancements in the other areas. Warfare on land, in the air, or on the seas is not given a special arena in this diagram, nor should space be included in a separate arena. The RMA will more than likely bring advancements in all of these media.

Since we are only at the beginning of what we believe will evolve into the American RMA, we cannot be certain about which directions the RMA may head, how long it may last, and who our adversaries may turn out to be. With so many uncertainties, the best that

military planners can do is to search for commonalities among the possible alternative futures, and to make preparations that best handle those commonalities. One area military planners cannot overlook is the importance of ground forces.

Importance of Ground Forces

An important element that may be lost by many in the discussion of the American RMA is the importance of ground forces. There are some scholars place too much emphasis on precision-strike weapons, incorrectly overemphasizing the role that airpower will play in future conflicts. “[S]tand-off weapons in the air and at sea cannot achieve victory without landpower.”⁴² Military forces may fly over terrain and bomb it continually, but it truly does not control territory until soldiers are standing on it. Future conflicts will require an effective and capable ground force in order to achieve victory.

Most of the current applications of U.S. military power are in military operations other than war (MOOTW), such as peacekeeping or peace-enforcement missions. This trend is likely to continue if the U.S. maintains a policy of global engagement. Whether to preserve the security of the U.S. in future wars, or to protect U.S. interests in MOOTW missions, the U.S. will need a capable ground force. Ground forces also have inherent capabilities that fill in the voids left by various problems associated with airpower and naval power.

⁴² Macgregor, 20.

While the preeminent position of the U.S. Air Force is generally undisputed, it should be noted that airpower alone cannot achieve victory in future conflicts. There are several problems associated with the use of airpower. First, and especially important for this discussion, is the fact that airpower is very vulnerable to periodic swings in technology.⁴³ Each new invention is sooner or later negated by a countermeasure. It takes considerable time for the military to develop and field a new aircraft. A missile is much quicker, and cheaper to develop. In this day and age, a \$20,000 dollar missile may shoot down a billion dollar aircraft.

Many believe that the coming RMA may bring about a decline in the use of manned aircraft to conduct deep operations.⁴⁴ Unmanned aerial vehicles (UAVs), cruise missiles and other systems may provide a more cost effective and safer means to conduct many air operations. Any new fighter developed today, may be obsolete by the time it is fielded.

Another problem with airpower in reference to combat operations is that "[a]irpower tends to operate in surges of firepower and does not apply constant pressure against enemy forces."⁴⁵ Only ground forces can maintain constant contact, and apply continuous pressure on enemy forces. In the words of an Air Force colonel who flew in the Gulf War: "Airpower can only do so much; the Army must go in on the ground to defeat the enemy's ground forces to finally win the battle."⁴⁶ At some point, ground forces are required to close with the enemy and finish the job.

⁴³ Ibid, 126.

⁴⁴ Ibid, 127.

⁴⁵ Ibid, 126.

⁴⁶ Ibid, 20.

Many scholars may also point to the current preeminence of U.S. naval power and believe that it should take the lead in the changes in warfare in the coming RMA. However, there are many problems associated with naval power. Without a doubt, the U.S. is the largest naval power, and no other nation at present is developing a navy to directly counter the U.S. Navy. A major problem with U.S. naval power is that the Navy has done too good of a job, and really faces no competitor. To counter the power of the U.S. Navy, it is much cheaper for other states to build or purchase missiles that can destroy ships than it is for them to build a navy. Because of this, most of the U.S. opponents are likely to remain shore-based. The Navy must find a viable role for itself under these conditions.

The Navy acknowledges these facts, and has therefore proposed a new concept of littoral warfare. Much of the concept revolves around forced entry operations from the sea.⁴⁷ The basic idea is to see how far inland naval and amphibious forces can operate and control the battle. However, there are some serious questions about the viability of the Navy's new littoral warfare concept.

The first problem with naval power in littoral operations is that it may not be a very effective use of resources. Much of the benefit of naval power arises from a show of force by a projection of U.S. power into a region. However, "[h]istorical experience suggests that deterrence is in the eye of the beholder, and that offshore naval forces usually fail to impress an opponent who is ashore."⁴⁸ Because of the vast disparities in naval forces, future opponents of the U.S. are more likely to be only ashore.

⁴⁷ Ibid, 127.

⁴⁸ Ibid, 205.

Amphibious operations in littoral operations will require a concentration of ships and several thousand sailors and Marines. Because of this requirement, the Navy risks "single point failure" in this type of operations.⁴⁹ This concentration of forces provides a very lucrative target. Which brings up a second problem: littoral operations may simply be too dangerous. The American public has become extremely averse to taking casualties in military operations. U.S. ships are not impervious to attacks, as the October 2000 attack on the U.S.S. *Cole*, in which 17 sailors were killed and 39 injured, proved.⁵⁰ Placing ships close to shore is simply becoming too dangerous. As Rear Admiral Henry Griffin told a reporter aboard the U.S.S. *George Washington*, "This ship will not go to a place where 6,000 people are put at risk."⁵¹

These concerns about the concept of littoral operations aside, there is another major problem associated with naval power in general, and it is that naval power is not as efficient as other means of power projection onto land with the current technologies available. This is especially evident in the realm of aircraft. The Air Force may be able to carry out the operations better, and cheaper. Recent examples bear this out. For example: "The performance of sea-based aircraft during Desert Storm suggests that naval aviation is far less efficient than land-based aviation and that carriers have much lower sortie rates."⁵²

There are two reasons for the decreased efficiency of naval aviation. The first is deck-cycle limitations. This refers to the time and space requirements involved in the

⁴⁹ Ibid, 127.

⁵⁰ Vince Crawley, "Cole Report: Not Enough Done to Shield Forces in Middle East: U.S. Military Still Too Vulnerable to Terror, DoD Says," *Army Times* (January 15, 2001): 16.

⁵¹ Macgregor, 204.

⁵² Ibid, 205.

process of launching aircraft from the deck of a ship. Only one aircraft can take-off or land from the deck of an aircraft carrier at a given time.

The second is engineering constraints inherent in sea-based aviation. There is a large penalty in performance suffered by naval aircraft. "The aerospace engineer's rule of thumb is that catapult launches and arrested landings impose a 1,200 pound penalty for additional structural weight."⁵³ That means 1,200 pounds of less fuel or weapons that a Navy aircraft can carry. The Navy would then need more sorties, or more aircraft involved, than would the Air Force to complete a similar mission.

Even deploying a carrier task group may not be a very efficient means of power projection. "In the time it takes to deploy one carrier to waters in the vicinity of a potential regional conflict, the U.S. Air Force can deploy 2.2 fighter wing equivalents to the same conflict."⁵⁴ I am not calling for the dissolution of the Navy. Protection of sea lanes will continue to be an important priority in order to maintain the ability to project U.S. power. However, the continued use of naval power in many cases may prove to be ineffective, dangerous, or inefficient.

In the search for the most efficient and effective expenditure of resources, the importance of ground forces in future conflicts cannot be overlooked. Research and funding should go to elements of the military that the U.S. will rely on in future military operations. "The Army leadership anticipates that nearly all of the overseas contingencies that will call for a U.S. military response over the next ten to twenty years will draw disproportionately on

⁵³ Ibid, 127.

⁵⁴ Ibid, 205.

the nation's conventional ground forces."⁵⁵ Army leaders are also aware of the budget constraints faced by the nation. "The nation does not need and cannot afford to maintain two more air forces as well as an amphibious army at sea."⁵⁶ Therefore, realizing the importance of ground forces in the military revolution and the limitations of budgetary constraints, the U.S. Army is in the midst of reorganizing its force structure and changing its doctrine. Army leaders have proposed some sweeping changes. Unfortunately, the path is still not entirely clear.

⁵⁵ Jim Courter and Loren Thompson, *Army Vision and the Transformation of Land Power in the Next Century*, "Strategic Review XXV, no. 3 (Summer 1997): 34.

⁵⁶ Macgregor, 214.

CHAPTER 2

Impact of the RMA on the U.S. Army

The exact impacts of the revolution in military affairs on the future of warfare and on the Army will never be certain ahead of time. But, what is known is that the RMA will definitely bring changes in equipment, doctrine, and organization. Advancements in technology leading to improvements in equipment appear to be the driving force behind the changes in the other two areas. The British strategist J.F.C. Fuller affirmed this fact when he stated: "with each change in weapons, organizations and tactics must also change."¹ Another recent author noted the same trend, and stated: "It appears that tactical doctrine and organizational structures are also changing as a byproduct of advances in technology."²

The development of the tank is a good example of this. While developed during the First World War, the tank proved largely ineffectual during that conflict. Used singly, as generally occurred in the Great War, the tank had little impact. But, when grouped together into formations with supporting infantry, the Panzer division proved very effective in battle. It was not until armies adopted doctrinal and organizational changes that the true potential of the tank was realized, as witnessed by the German *blitzkrieg*.

¹ Norman C. Davis, "An Information-Based Revolution in Military Affairs," in *In Athena's Camp: Preparing for Conflict in the Information Age*, ed. John Arquilla and David Ronfeldt (Santa Monica, CA: Rand, 1997), 90.

² Robert L. Bateman III, "Pandora's Box," in *A View From the Front Lines*, ed. Robert L. Bateman III (Novato, CA: Presidio Press, 1999), 1.

The technological advances that the RMA is making possible are bringing about recent equipment changes. One of the biggest changes for the Army is the continuing development of the Land Warrior System. Land Warrior is a program to provide soldiers with advanced capabilities and protective equipment. The system provides soldiers with "networked digital communications, real-time information updates, day and night video, position tracking, thermal sighting and imaging, and a layered voice communications system."³ The system is oddly reminiscent of the equipment used by the Mobile Infantry in Robert Heinlein's 1959 novel, *Starship Troopers*. Land Warrior currently has five subsystems.⁴

The first of these subsystems in the Land Warrior System is the weapon subsystem. It consists of the M4 carbine with a thermal sight, multifunctional laser, and a color daylight video sight. The M4 carbine is an updated version of the M16 rifle that U.S. soldiers have carried since the Vietnam War. It has a collapsible stock and a shortened barrel. Second is the integrated helmet subsystem, which has a color display, night display, and an audio system. Third is the computer/radio subsystem. This contains an integrated global positioning system (GPS), an internal navigation system, and secure voice and data communications. The fourth is the software subsystem. This provides the soldier with a common tactical picture, and shows the soldier's location as well as the location of other soldiers. The fifth subsystem is the protective clothing and individual equipment issued to the soldier.

³ Dennis Steele, "The Revamped Land Warrior System Debuts," *Army* 50, no. 11 (November 2000): 35.

⁴ Ibid, 37.

While technological and equipment advances may bring about many of the changes, the advances also come with a word of caution. Military planners must remember during force modernization that people, not things, are decisive in war. The new equipment should not maintain the prominent role. "The thinking behind force modernization must be to 'equip the man; not man the equipment.'"⁵

Doctrine may help to maintain the proper balance between man and the equipment. "Doctrine is a set of agreed-upon statements or beliefs about warfare."⁶ It is the overarching guide that the armed forces use to plan and conduct military operations. Doctrine should not be confused with strategy, which is at a much lower scale. Strategy is "the art or science of shaping means so as to promote ends in any field of conflict."⁷ Strategy is the plan, based upon doctrine, used to conduct a military campaign.

Further changes will occur as the Army develops doctrine that capitalizes on the improvements in equipment. Changes in doctrine will further drive changes in organization, as the Army searches for better ways to arrange its forces in light of improved equipment and the doctrine that supports it. We can witness some of this process in the U.S. Army today.

Looking at the current structure of the U.S. Army, the Army believes that its current heavy and light only options are not adequate. General Eric Shinseki, Army Chief of Staff, believes that "our heavy forces are too heavy and our light forces lack staying power."⁸ For example, the Army's M1 Abrams tank weighs 72 tons when combat loaded. It is very

⁵ Douglas A. Macgregor, *Breaking the Phalanx* (Westport, CT: Praeger Publishers, 1997), 172.

⁶ Bateman, 4.

⁷ Barry Buzan and Eric Herring, *The Arms Dynamic in World Politics* (Boulder, CO: Lynne Rienner Publishers, 1998), 2.

⁸ Bill Owens and Ed Offley, *Lifting the Fog of War* (New York: Farrar, Straus and Giroux, 2000), 195.

difficult to arrange enough transportation to deploy a heavy armored or mechanized division's worth of these tanks. Light infantry forces can be quickly deployed, but can also be quickly overpowered if forced to confront enemy armored or mechanized forces.

Because of this, the Army is recently experimenting with a new medium brigade concept. The Army can quickly deploy these units, and they would have more protection than light infantry units. This concept is merely an interim step on the way to a future structure that can take advantage of new weapons developed from technological advances brought about by the RMA. The future force may have all of the capabilities of a tank, but spread out on several platforms instead of being contained on just one vehicle. New technology might make the doctrinal and organizational changes for this proposal possible.

The Army is also considering other organizational changes besides the medium brigade. One possibility is that individual Army units may become smaller in the future due to improvements in weapons. Military writers have noticed this possibility for many years. B.H. Liddell Hart, a famous military writer during the period between the Great War and the Second World War, noted that the "weight of force in modern war was related to weight of fire and not merely numbers of men."⁹ With better, more powerful weapons, smaller numbers of soldiers can achieve the same results as larger units of present-day forces. Also, smaller units present a smaller target for the better, more powerful weapons of the enemy.

Also, the Army may grow smaller as a whole due to more accurate intelligence and improved communications brought about by the RMA. The Army may be able to flatten the organization by eliminating the need for layers of middle management.¹⁰ With better

⁹ John A. English and Bruce I. Gudmundsson, *On Infantry: Revised Edition* (Westport, CT: Praeger Publishers, 1994), 49.

¹⁰ Macgregor, 34.

information and communications, the Army would be able to place decisions closer to the action. The RMA may bring a great deal of change to the Army. For certain, it will bring changes in technology, doctrine and organization. Whatever these changes will be, the military must remain able to defeat any threat to U.S. security.

Types of Threats

An important fact to remember is that the RMA is not occurring in a vacuum. Other factors shape and modify the direction the RMA will take. Some of these factors, which I will briefly discuss in this section, are the types of threats that the U.S. will most likely face in the future, and some of the trends in the evolution of warfighting structures. Then, I will briefly describe the current organization of the U.S. Army, and some of the current proposals for its restructuring.

With the Cold War over, it has become increasingly difficult for the United States to delineate the threats for which it needs to defend itself against. After the Cold War, the first official attempt to redefine the threat occurred in the Bottom Up Review (BUR), conducted in 1992 and 1993. It "postulated two major regional contingencies that occur nearly simultaneously."¹¹ Most military analysts concur that these two contingencies are the

¹¹ National Defense University, Institute for National Strategic Studies, "Force Structure," in *1997 Strategic Assessment: Flashpoints and Force Structure*, ed. Hans A. Binnendijk and Patrick L. Clawson (Washington, D.C.: Government Printing Office, 1997), 260.

Persian Gulf and the Korean Peninsula. The 1997 Quadrennial Defense Review (QDR) also confirmed the standard of the two major theater wars (MTW) strategy.¹²

However, in recent years some argue that the two MTW strategy is no longer valid. There are several reasons for this. One is that most senior military leaders now admit that U.S. forces could not adequately fight nearly simultaneous conflicts in two different theaters. We simply do not have the capability to accomplish this strategy. Another is that many analysts now believe that the threat is diminishing on the Korean Peninsula. Within a few years, the U.S. may only have to concern itself with the threat in the Persian Gulf.

Instead of the two MTW strategy, some military analysts support the "win-hold-win" strategy that Les Aspin promoted in 1993.¹³ This plan is similar to the way the United States fought during the Second World War. The plan at that time was to place the major effort in fighting in Europe while holding off the Japanese in the Pacific theater. Once the Allies subdued Europe, the U.S. could turn its main effort to fighting in the Pacific theater. Some analysts believe that a similar strategy would be adequate today.

However, there is a growing movement that believes that the threat facing the United States is broadening and expanding into different areas. This view looks beyond a narrow definition of military-related security threats inherent in the two MTW strategy. The traditional military view of security threats is designed to protect "the American military's traditional centers of gravity – ports, airfields, fuel, water, and prepositioned equipment sites."¹⁴ The definition of security is expanding to include economic, ecological and human

¹² Daniel Goure, "The Resource Gap: The Mismatch Between US Forces' Requirements and Available Resources Renders the Two-War Strategy Irrelevant," *Armed Forces Journal International* (May 2000): 38.

¹³ Ibid, 41.

¹⁴ Macgregor, 98.

bases.¹⁵ Human rights is the only explanation for the U.S. involvement in such instances as Somalia and Haiti. There definitely was no military-related reason for involvement in these instances. Whether or not economic, environmental and humanitarian issues remains central to U.S. vital interests is up for discussion.

Warfare is also expanding into different dimensions, or media. Some military analysts believe that "warfare has already become five dimensional – land, sea, air, space, electronic (and one could make submarines into a separate dimension)."¹⁶ Land, sea and air are the more traditional forms of warfare. The concept of space warfare is relatively new, and there will be much discussion in the coming years of whether, or rather "how," to arm space. The idea of arming space seriously took root with President Reagan's 1983 "Star Wars" speech, and has been fueled by recent proposals for a national missile defense (NMD).

Military planners generally refer to the electronic dimension of warfare facing the U.S. as information warfare (IW). This type of warfare is "actions taken to degrade or manipulate an adversary's information systems while actively defending one's own."¹⁷ It is to degrade the opponent's ability to use the media, while protecting our ability to use it.

There are also distinct forms of IW. The first is cybernetic warfare (CYW), which involves "operations to disrupt, deny, corrupt, or destroy information resident in computers and computer networks."¹⁸ Another form of IW is transnational infrastructure warfare

¹⁵ Stephen J. Blank, "Preparing for the Next War: Reflections on the Revolution in Military Affairs," in *In Athena's Camp: Preparing for Conflict in the Information Age*, ed. John Arquilla and David Ronfeldt (Santa Monica, CA: Rand, 1997), 73.

¹⁶ Ibid.

¹⁷ Patrick M. Hughes, "Statement for the Record: Global Threats and Challenges: The Decades Ahead," August 19, 2000 <<http://www.dia.mil/Site5/Aboutdia/globalthreats/dr-ssci-990604.html>>, 20.

¹⁸ Ibid.

(TIW). This involves “attacking a nation’s or sub-national entity’s key industries and utilities – to include telecommunications, banking and finance, transportation, water, government operations, emergency services, energy and power, and manufacturing.”¹⁹

The United States is also facing other new forms of threats. In the present and into the future, the U.S. is most likely to face asymmetric forms of warfare. Asymmetric warfare involves “attacking an adversary’s weaknesses with unexpected or innovative means while avoiding his strengths.”²⁰ It will be very unlikely for the world to ever again witness large armies clashing against each other across the plains of Europe as it did this past century in two world wars.

In the future, “we are very likely to be the focus of numerous asymmetric strategies as weaker adversaries attempt to advance their interests while avoiding a direct engagement with the U.S. military on our terms.”²¹ Because of this, future conflicts are more likely to be on a smaller scale. It is also likely that much of the combat will take place in urban environments. Urban environments help to level the playing field for smaller, less technically advanced opponents. Much of the advances from the high-tech weaponry of the U.S. are negated when fighting becomes man versus man in clearing room-to-room, and building-to-building.

Asymmetric strategies also mean that the U.S. will likely experience a growing number of terrorist attacks, with civilians and infrastructure as the intended targets. Using computers and the Internet, terrorists may be able to carry out very effective attacks against

¹⁹ Ibid.

²⁰ Ibid, 21.

²¹ Ibid.

U.S. infrastructure from great distances away. It may also be very difficult to determine who actually launched the attack.

Such terrorist attacks may also be asynchronous. This means that there may be a “significant lag time between attack and response.”²² This is a delayed attack that might occur after the United States lowers its guard. The attack may come months or years after a U.S. action that analysts might discover and look back on as the triggering event. The delay in the attack may further add to the difficulty in determining who carried out the attack.

Unfortunately, terrorism is becoming more and more of a threat. In the past, as noted by the terrorism expert Brian Jenkins, terrorists normally wanted a lot of people watching, not a lot of people dead.²³ This might be changing in recent years. There is growing concern we are witnessing the rise of a new breed of terrorists that may use weapons of mass destruction (WMD). Terrorists have already used sarin gas in the Tokyo subway. Other such attacks may soon follow.

The definition of what constitutes WMD is also expanding. Traditionally, WMD normally referred to nuclear, biological and chemical (NBC) weapons. Now, it also includes large conventional weapons, such as the type used in Oklahoma City, and also what many refer to as radiological, or “dirty bombs.” Terrorists can easily make this type of bomb by simply attaching radioactive material to conventional explosives. Dirty bombs will contaminate a target area with radiation, rather than destroying it with blast and heat.²⁴ Such

²² Ibid.

²³ Steven Simon and Daniel Benjamin, “America and the New Terrorism,” *Survival* 42, no. 1 (Spring 2000): 66.

²⁴ Hughes, 10.

a device would greatly hamper clean-up efforts, and greatly increase the psychological impact of the attack.

This new breed of terrorist appears to want "a lot of people watching *and* a lot of people dead."²⁵ Unfortunately, WMD can provide an effective means of carrying out their attack, and at a cheaper cost than a complete reliance on conventional means for the same level of destruction. Thankfully, the use of WMD technologies is fraught with difficulties. They are generally difficult to obtain, safely handle, and safely store.²⁶ An effective delivery means can also provide an additional challenge for the use of certain types of WMD by terrorists. Proper aerosol dispersal of chemical agents can prove to be a rather difficult for terrorists. However, rental trucks are rather effective as a delivery means for other types of conventionally formed weapons.

For the sake of ease and simplicity in military planning, it is unfortunate that the Cold War is over. The security situation of the United States is no longer so clear, nor is the threat so clearly specified. Military planners do think that the U.S. will face more asymmetric forms of attack, namely in the forms of terrorist attacks and also in the form of information warfare. It is also very likely that they will be asynchronous attacks. Because the character of the threat is no longer specified, "it is not surprising that the Army's Force XXI program has not resulted in any significant change in the warfighting structure of Army forces since Desert Storm."²⁷ While the specific changes in the structure may not be certain at this point,

²⁵ Simon and Benjamin, 71.

²⁶ Ibid.

²⁷ Macgregor, 50.

there are trends in the evolution of military forces that may help military planners in the restructuring of the U.S. Army.

Trends in the Evolution of Warfighting Structures

Technology and weapons are changing. Changes in doctrine and organization for the Army will soon follow. Military planners cannot foresee what the end result will be, but they can look at commonalities from the past to help restructure the Army of the future. There are seven trends in the evolution of warfighting structures that have withstood the test of time, strategy and technology.²⁸

The first trend in the evolution of warfare is that:

the technology of war creates a steady rise in the lethality of weapons and munitions, greater mobility, and the endless requirement for dispersion. These influences, in turn, compel armies to integrate more and more arms and services at progressively lower and lower levels of organization.²⁹

Over time, the trend is for armies to disperse their soldiers as weapons improve. They can, and must, do this as they “concentrate the effects of weapons rather than troops.”³⁰

The second trend is that “battlespace is continually expanding.”³¹ In this century, the world witnessed warfare expanding into the air. The future will bring warfare into the

²⁸ Ibid, 50-51.

²⁹ Ibid, 50.

³⁰ Ibid, 124.

³¹ Ibid, 50.

dimensions of space and electronic media. Information warfare may take the lead role of combat in the future.

The next two trends are also closely related to the expansion of battlespace. The third is that this expansion “increases the volume of information that is relevant to the commander’s coherent view of the operational environment.”³² The fourth trend is also closely related to the third. Because of the dispersion of forces, and because of the increase in the volume of relevant information, the need for the information to be both timely and accurate has greatly increased.³³

The fifth trend in the evolution is that “all arms and services on the ground develop a need for the same mobility and nearly the same degree of protection as the warfighting organizations they support.”³⁴ This need for increased mobility will be a critical issue for the logistic units that must support the combat formations. Increased mobility requires increases in the number of vehicles. More vehicles will translate into more maintenance and greater fuel requirements, increasing the logistics tail. Personnel units, if deployed into theater, will also need increased mobility.

The sixth trend deals with the technology of aviation. Aviation assets tend to reinforce the effects of existing trends, and help military organizations cope with their effects. “When integrated with ground elements, aviation provides ground forces with information, security, protection, ‘operational reach,’ and increased tactical efficiency.”³⁵ It

³² Ibid.

³³ Ibid.

³⁴ Ibid, 51.

³⁵ Ibid.

is uncertain at this point what role space will have on warfare. Space may be a mere extension of air, or it may unleash a new trend in warfare by itself.

The final trend in the evolution of warfighting structures is political in nature. "The strategic environment matters. When international stability is at risk, strategic considerations dominate national policy in democratic states."³⁶ Unfortunately, the term "international stability" is not so clearly defined anymore. It may include such events as economic and humanitarian crises. Politicians may view the military as a tool to be utilized in a growing list of contingencies. The military cannot divest itself from politics, for war is "a continuation of political intercourse, carried on with other means."³⁷

These seven trends may help in the planning of the reorganization of the U.S. armed forces. In order to understand how the Army may restructure in the future, it helps to understand the current structure of the U.S. Army to use as a frame of reference. Especially since radical changes are seldom seen in such conservation organizations as the military.

Current Structure of the U.S. Army

Since the end of the Cold War, the U.S. Army has decreased in size by almost 40 percent. As of the end of fiscal year (FY) 1999, which was September 30, 1999, the Army

³⁶ Ibid.

³⁷ Carl von Clausewitz, *On War*, eds. And trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1984), 87.

had 1,268,633 people in the total force structure.³⁸ Of this number, 479,426 soldiers were in the active component, 357,469 soldiers in the Army National Guard, 206,836 soldiers in the U.S. Army Reserves, and an additional 224,902 Army civilians.³⁹ The U.S. Army Field Manual (FM) 71-100 describes how these soldiers are organized to form the Army.

From larger to smaller in size, the U.S. Army unit structure is: army, corps, division, brigade, battalion, company, platoon and squad. The U.S. Army currently has three armies in its structure. These are: First U.S. Army, at Fort Gillem, Georgia; Fifth U.S. Army, at Fort Sam Houston, Texas; and Headquarters, U.S. Army Europe (USAREUR) and Seventh Army, at Heidelberg, Germany.

The U.S. Army has four corps in its organization. These corps are: I Corps, at Fort Lewis, Washington; III Corps, at Fort Hood, Texas; V Corps, at Heidelberg, Germany; and XVIII Airborne Corps, at Fort Bragg, North Carolina. A corps is generally comprised of three to five divisions.

The division is the key component to the organization of the U.S. Army. Currently, the Army has ten divisions of approximately 15,000 soldiers each. A division is normally comprised of three maneuver brigades, which are the typical, ground combat forces. These are the infantry, mechanized infantry, or armored forces. In addition to the maneuver brigades, the division has an aviation brigade, a division artillery (DIVARTY) brigade, an engineer brigade, a division support command (DISCOM), and a headquarters command.

Each brigade has roughly 3,000 to 5,000 soldiers. Each brigade generally has three battalions, of roughly 1,000 soldiers each, including a headquarters and headquarters

³⁸ "United States Army Posture Statement FY01," November 15, 2000 <http://www.army.mil/aps/aps_pdf.htm>, 2.

³⁹ Ibid.

company (HHC). A battalion has between three to five companies of approximately 150 soldiers each. A company usually has three platoons of roughly 45 soldiers, each. A platoon has three to five squads of nine soldiers, each.

Five of the ten divisions in the U.S. Army are armored or mechanized divisions. These are sometimes referred to as the "heavy" divisions. Specifically, these divisions are: 1st Armored Division, 1st Infantry Division (Mechanized), 3d Infantry Division (Mechanized), 4th Infantry Division (Mechanized), and 1st Cavalry Division. There are two light infantry divisions: the 10th Mountain Division and the 25th Infantry (Light). The Army has one airborne division, the 82d Airborne Division, and one air assault division, the 101st Airborne Division. The remaining division is the 2d Infantry Division in Korea. It is a "medium" division, with one air assault brigade, one mechanized infantry brigade, and one armored brigade.

The Army organization into divisions remains roughly unchanged since the Second World War. In fact, the basic concept of the division remains unchanged since the time of Napoleon. With the beginning of the revolution in military affairs, the Army is seriously considering restructuring, and possibly dispensing with the division as an organizational structure. There are several proposals for the future structure of the Army.

Possible Future Structures of the U.S. Army

It has proven to be very difficult for the U.S. Army to follow through with any drastic reorganization. The true impact of the RMA is yet unknown, and the threats to national

security are not so clearly defined as they were during the Cold War. It is not as if there hasn't been any discussion on the future structure of the U.S. Army. It has designed Force XXI and the Army After Next (AAN). However, neither of these proposals calls for any radical change. But such is in line with military thought. The national security of the United States is too great of a concern to take chances with.

Force XXI integrates information technologies into the existing mechanized combat and supporting systems in what some call the "digitization" of the force.⁴⁰ With this plan comes improved reconnaissance and surveillance technology linked to deep-strike weapons, which should greatly increase the combat effectiveness of the divisions. To further assist in this effort, a reconnaissance troop is added to each maneuver brigade, and a battalion of multiple launch rocket systems (MLRS) is added at the division level.⁴¹ Additionally, the Army plans to field some leap-ahead systems, such as the Comanche helicopter and the Crusader howitzer."⁴²

Doctrinally, Force XXI recognizes the requirement for early entry forces to have the capability to fight their way in. This plan also stresses the necessity of being able to fully integrate with the other services to conduct joint operations. Force XXI is the first step toward taking advantage of the RMA. It is an interim step, or a "halfway point" in the journey of the transition.⁴³

⁴⁰ Ibid, 24.

⁴¹ Ibid, 25.

⁴² Ibid, 16.

⁴³ Jim Courter and Loren Thompson, "Army Vision and the Transformation of Land Power in the Next Century," *Strategic Review* XXV, no. 3 (Summer 1997): 32.

The 4th Infantry Division (Mechanized) (minus) at Fort Hood, Texas is the first one to undergo this conversion.⁴⁴ This division has only recently completed its digitization process. The second division to convert will be the 1st Cavalry Division, also at Fort Hood. Its digitization should be complete in fiscal year 2003.

But Force XXI is not without its criticisms. One of the main criticisms of this plan is that it upgrades U.S. Army forces in the wrong order. The Army has made little effort to improve the combat effectiveness of its light forces. Admiral Owens points out that “the decision to ‘digitize’ the U.S.-based heavy divisions first, then the first-to-fight ‘light’ divisions, and finally the overseas-based American units means that the Army units most likely to face combat in the decade ahead... won’t be upgraded until 2009.”⁴⁵ The Army should completely reverse this order for the transformation of its units.

A second criticism of Force XXI is that it does not go far enough in reorganizing the structure of the Army. Some say that it merely an attempt “to graft the information-age technology on George Marshall’s pre-World War II division design.”⁴⁶ Further, there has been no real attempt to help integrate the structure into more of a joint force, a key component of the warfighting effort acknowledged by Force XXI. Granted, it is a first step, but Force XXI does not go far enough in restructuring the Army to take full advantage of the RMA.

⁴⁴ “United States Army Posture Statement FY01,” 25.

⁴⁵ Owens and Offley, 218.

⁴⁶ Ibid.

The Army has also put forth a proposal entitled the Army After Next (AAN). AAN hopes to produce more of a "knowledge-based Army."⁴⁷ Army After Next is the longer-term destination that will utilize new digital technologies and new generation weapon systems. This new equipment, combined with good leadership and training, will hopefully give the Army the type of capabilities it desires. This concept remains little more than a vision or the future, at present. The Army does not expect to complete developing this force before 2020.⁴⁸

There have been a couple of more recent radical proposals for the restructuring of the Army. The first is a proposal by General Eric Shinseki. The Army is currently testing this plan. Another is a proposal by Colonel Douglas Macgregor that calls for an Army comprised of brigade task forces.

General Shinseki's Vision

General Eric K. Shinseki, the new U.S. Army Chief of Staff, developed some new thoughts on the future organizational structure of the Army. Despite some opposition, he is forging ahead with his transformation of the Army. His vision foresees an eventual transformation, while preserving current combat capabilities of the Army. Such a transformation will be more expensive than immediately and completely transforming the

⁴⁷ Edward T. Buckley Jr., Henry G. Frank, and A. Fenner Milton, "Army After Next Technology: Forging Possibilities into Reality," September 11, 2000 <<http://www.cgsc.army.mil/milrev/English/MarApr98/buckley.htm>>, 2.

⁴⁸ Courter and Thompson, 32.

force to take advantage of the RMA, but it is more secure. However, nobody is sure how the RMA will end up, and the U.S. still faces regional threats in which it may become actively involved. General Shinseki's vision consists of "three parallel vectors: the legacy, interim and objective forces."⁴⁹ Graphically, his vision appears in Figure 4.⁵⁰

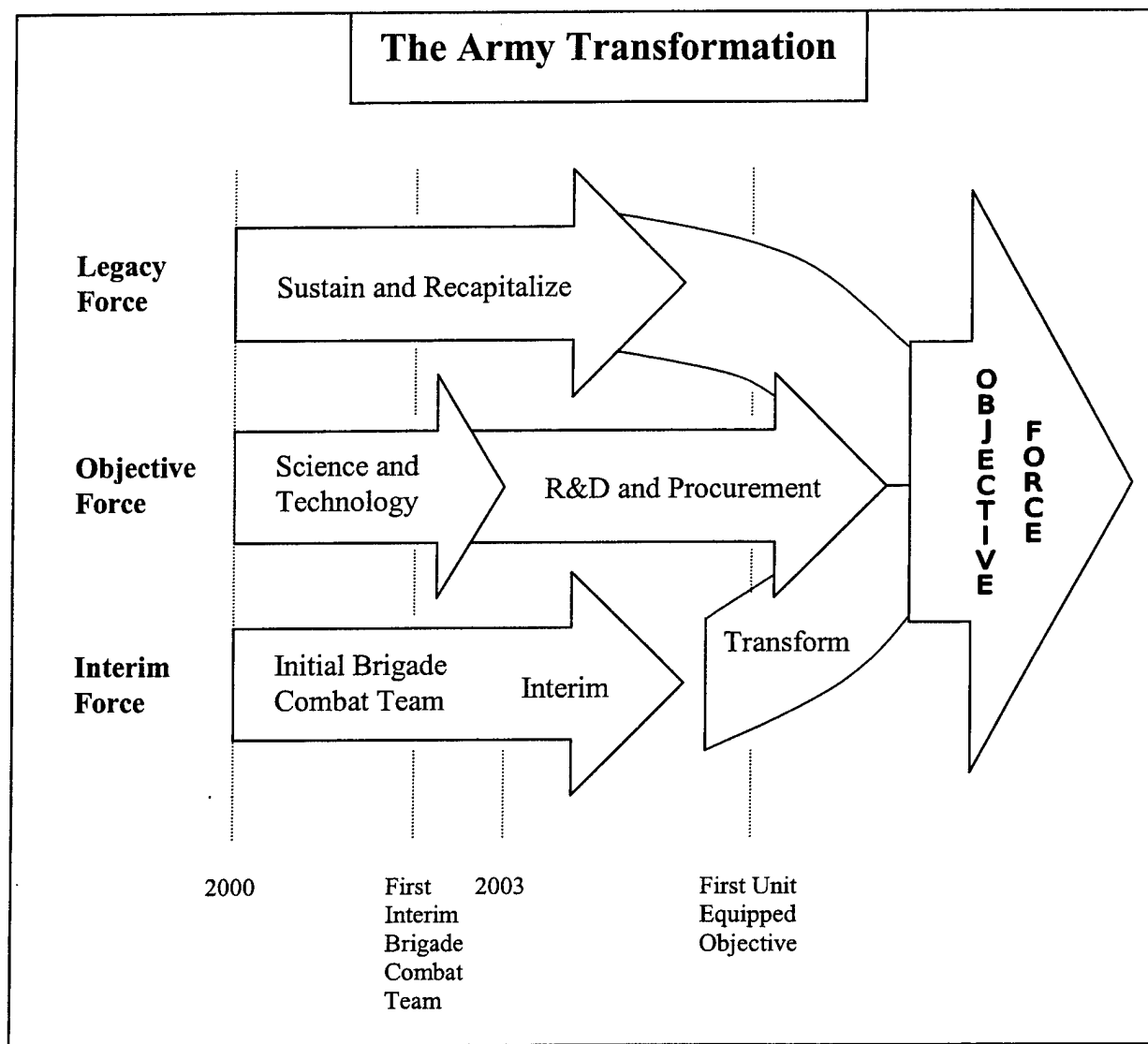


Fig. 4. General Shinseki's transformation of the U.S. Army.

⁴⁹ Theodore G. Stroup, "The Ongoing Army Transformation," *Army* (July 2000): 8.

⁵⁰ *Ibid*, 7.

The Objective Force is the first vector. It is the future goal of the structure of the Army, replacing all current weapons platforms with state-of-the-art equipment. It is touted to become the most mobile, lethal and sustainable portion in the Army's inventory. Its centerpiece consists of a new armored vehicle, currently entitled the "future combat system" (FCS).⁵¹ However, the Army has not yet designed the FCS, or even decided upon the capabilities it requires. In any case, the Army hopes for the FCS to enter service within a decade, and to be fully fielded by 2020. This goal is highly optimistic based on the historical examples of the fielding of new weapon systems.

The second vector, the Interim Force, bridges the gap between the current force structure and the possible future changes. The Army is already testing the concept by transforming two brigades at Fort Lewis, Washington into the new "medium-weight brigade combat teams" (BCT).⁵² While not as heavily protected as an armored force, it is much more deployable. Conceptually, the BCT "can deploy anywhere in the world in four days, followed by the remainder of the division 24 hours later, and deploying five divisions anywhere in 30 days."⁵³ On the plus side, the BCT does have more protection than a typical light infantry unit. Even a thinly armored vehicle provides more protection for a soldier than would his flak jacket provide alone. The BCT has a manning structure similar to current brigades, at approximately 4,000 soldiers each. The brigades at Fort Lewis are utilizing off-the-shelf equipment, and they are attempting to develop the organizations and doctrine

⁵¹ Ibid, 8.

⁵² Jason Sherman, "Momentum, Mo' Money: What 12 Months of Army Transformation Efforts Have Yielded," *Armed Forces Journal International* (October 2000): 46.

⁵³ Ibid.

needed to allow the transformed force to fight and win on the battlefield. The Interim Force is expected to grow to no larger than five to eight brigades within the next decade.⁵⁴

The Legacy Force is the third vector, and it consists of the existing heavy and light divisions currently in the Army inventory. Since the directions of the technological changes of the RMA are still unknown, it will be the "backbone of America's formidable landpower capability for many years to come."⁵⁵ However, the equipment in these divisions is at the end of its useful service life, and must be recapitalized and modernized. This process will reduce the funds available for the transformation of the Army. But the U.S. cannot ignore it, since the Legacy Force is insurance in case the revolution turns out to be more of an evolutionary step.

General Shinseki's vision of the transformation of the U.S. Army could prove to be very costly. It is trying to maintain the capabilities of the old structure, while attempting to also develop a completely different, modernized force. For it to work, the Army, the administration and Congress must support "recapitalization of the legacy systems, fielding of the interim brigades, and research and development for the objective force."⁵⁶ Continued modernization will remain costly, involving tanks upgrades, improvements in helicopters, artillery modernization, and the "digitization" of divisions.⁵⁷ Each interim brigade will cost roughly \$500 million to field.⁵⁸ But total cost figures for the Objective Force will be

⁵⁴ Stroup, 8.

⁵⁵ Ibid.

⁵⁶ Ibid, 10.

⁵⁷ Sherman, 50.

⁵⁸ Ibid, 46.

unavailable until the Army can ascertain how it should structure itself in the future. But, General Shinseki's plan is not the only vision for the future structure of the Army.

Colonel Macgregor's Vision

Colonel Douglas Macgregor argues that the Army should disband its current divisional structure in order to form brigade task forces, or combat groups. He argues that the Army can reorganize the soldiers and equipment currently in the ten division force into these brigade task forces. Macgregor believes that this structure would better facilitate the future transformation of the Army, and ease some of the turbulence caused by the transition.

In the big picture, Macgregor calls for the formation of standing Joint Task Force (JTF) headquarters under the regional unified commands: U.S. European Command (USEUCOM), U.S. Central Command (USCENTCOM), U.S. Forces Korea Combined Forces Command (USFK/CFC), and U.S. Atlantic Command (USACOM).⁵⁹ Each of the JTFs "will need an Army component that is composed of highly mobile, self-contained, independent 'all-arms' combat forces-in-being."⁶⁰ In order to accomplish this, he proposes to disband the current ten divisions of the U.S. Army and reorganize the soldiers and equipment into between 26⁶¹ and 30⁶² brigade task forces, or "combat groups."⁶³ Macgregor

⁵⁹ Macgregor, 150-51.

⁶⁰ Ibid, 5.

⁶¹ Ibid, 68.

⁶² Ibid, 187.

⁶³ Ibid, 74.

argues that by doing this the Army can at least move to an intermediate force design that bridges the gap between today's Army and the one envisioned in Force XXI.⁶⁴

Macgregor proposes a detailed description of various forms of these combat groups. The composition of each type of combat group varies slightly, but they do have some commonalities in design. Each type of combat group varies slightly in size, but all would be the approximate size of a current brigade, between 4,000 and 5,000 troops.⁶⁵ A brigadier general with a "robust, experienced staff" would command each combat group.⁶⁶ To each combat team he would add a new C4I (command, control, communication, computer, and intelligence) battalion to assist with the requirements of information warfare.⁶⁷ The teams would function in three 180-day operational readiness cycles: the training cycle, deployment ready cycle, and reconstitution cycle.⁶⁸ Macgregor proposes four types of these brigade combat groups.

The first type of brigade is the Heavy Combat Group. It has 4,600 soldiers formed into a reconnaissance squadron, three combined arms battalions, a hybrid indirect fire battalion, a support battalion, and a new C4I battalion.⁶⁹ Its main equipment consists of 132 of the M1A1/2 tanks, and 132 of the M2/3A2 armored fighting vehicles (AFV). Its primary mission is to conduct decisive maneuver operations.⁷⁰

⁶⁴ Ibid, 61.

⁶⁵ Ibid, 75.

⁶⁶ Ibid, 81.

⁶⁷ Ibid, 73.

⁶⁸ Ibid, 152.

⁶⁹ Ibid, 76.

⁷⁰ Ibid, 75.

The second type is the Airborne-Air Assault Group.⁷¹ It has 4,150 soldiers organized to provide more mobility and firepower than the current airborne infantry lacks. Its main equipment includes 24 towed 155mm howitzers and various helicopters, to include 15 of the AH64s and 93 of the UH60s. Its primary missions are to conduct forced entry operations, close and deep economy-of-force operations, contingency operations, and MOOTW as needed.

The third type of brigade under Macgregor's proposal is the Heavy Recon-Strike Group.⁷² It is the largest of the proposed brigades, with 5,000 soldiers. Its main equipment includes 126 of the M1A1/2 tanks, 153 of the M2/3A2 AFVs and various helicopters. The primary missions of the Heavy Recon-Strike Group are to conduct close and deep economy-of-force operations (guard, screen, cover), and security operations to protect the JTF.

The final brigade type is the Light Recon-Strike Group.⁷³ This brigade type has the second highest number of personnel, with 4,850 soldiers. Its primary weapons systems include 126 armored gun systems (AGSs) and 160 light armored vehicles (LAV(PI)s). The primary missions of the Light Recon-Strike Group are to conduct close and deep maneuver operations, support forced entry operations, contingency operations and MOOTW as needed.

How to transform the army is obviously not clear. While the impact of the RMA, and the proper course that the U.S. armed forces should take remain unclear, perhaps military planners can gain some insights from history. The British example during the interwar period clearly shows that doing nothing is not an option. For, "it might be said that when

⁷¹ Ibid, 75.

⁷² Ibid, 78.

⁷³ Ibid, 79.

presented with a fork in the road, the British turned neither left nor right but forged straight ahead.”⁷⁴ The U.S. is presently trying to go down every road. Sooner or later the U.S. Army will have to commit to a path of transition.

During the transformation caused by the RMA, it may be necessary to field at least two forces within the active army.⁷⁵ One force might receive the latest equipment and be used to fight high-intensity conflicts. The second might maintain older equipment and perform military operations other than war (MOOTW). General Shinseki’s plan follows this train of thought. His plan calls for three different versions of the Army. But there are numerous problems with such a proposal. It will be very expensive to field numerous versions of equipment and to be able to maintain them. It would also be impossible to segment training schools based on where each soldier might be assigned.⁷⁶

Clearly, there are no easy answers on the transformation of the Army. The only certainty is that change is coming. If the Army changes its structure, the personnel organizations that support it must also change. But change comes at a cost.

Budget Considerations

Changes to the United States Army may be very necessary, but they do run up against the reality of budget constraints. While there may be a pay increase for the soldiers, there

⁷⁴ English and Gudmundsson, 54.

⁷⁵ Bateman, 41.

⁷⁶ Ibid, 42.

has been some mention of cutting the overall military budget under the new Bush administration. Additionally, the Army has traditionally done rather poorly in comparison to the other services in the battle over the budget. Being more technology-oriented services, the Air Force and Navy have normally received a larger portion of the budget than the manpower intensive Army. New programs, such as the National Missile Defense (NMD) program may also take a slice out of the available budget pie, making it even more difficult for the Army to receive the funding it requires for the new weapons systems and the transformation of its organizations. It will be interesting to see how much of the funding for the Army transformation survives in the next few fiscal years.

Thankfully, the transformation of the Army has done relatively well in the battle over dollars to this point. The Army has been able to field one medium-weight interim brigade at Fort Lewis, Washington. It also received \$500 million in the fiscal year 2001 budget to field a second of these brigades.⁷⁷ However, the future may not be as bright. The FY 2001 budget cut the Army's overall buying power by 1.5 percent, and longer-term budget prospects are not even as promising.⁷⁸ For "nearly one third of the Army's transformation requirements remain unfunded in the Army's new six-year spending plan, according to service documents."⁷⁹

Despite budget concerns, one fact is certain: the transformation of the Army remains a high budgetary priority within the Army itself. It must. The future of the Army, and perhaps the security of the nation, may well depend on it. Within the Army's six-year budget

⁷⁷ Sherman, 46.

⁷⁸ Ibid, 52.

⁷⁹ Ibid.

plan, it reallocated \$16 billion to support this transformation.⁸⁰ The Army will also spend most of its research and development funding for the transformation to the objective force. Out of the Army's 2002 to 2007 spending plan, it will spend \$8.2 billion out of the total \$8.5 billion for science and technology for the objective force.⁸¹ Of these funds, the Army will spend \$3 billion to develop the future combat system (FCS) weapons platform for the objective force.⁸²

However, the Army's current Legacy Force will bear the brunt of these expenditures. This funding shift has left the Legacy Force with a negative balance of \$14 billion for its required upgrades to current weapons systems.⁸³ This will make it very difficult for the Army to upgrade or replace any of its aging major weapons systems in the next few years.

While the next few years may be difficult, the transition of the Army, caused by the RMA, may actually prove to be more cost effective in the long term. With improved equipment and capabilities, the Army may be able to accomplish its mission with fewer soldiers. The newer wheeled vehicles used in the interim brigades, and possibly in the FCS, will require less maintenance, and will certainly use less fuel than the M1 tank.

The problem might be in acquiring the funds to carry out this transformation. The current Army structure, the legacy force, will suffer in the short-term. This includes the current structure of the Army's personnel support organizations.

⁸⁰ Ibid.

⁸¹ Ibid.

⁸² Dennis Steele, "The Army Magazine Hooah Guide to Army Transformation: A 30-Minute Course On the Army's 30-Year Overhaul," *Army* 51, no. 2 (February 2001): 40.

⁸³ Sherman, 52.

CHAPTER 3

Personnel Organizations of the U.S. Army

Unfortunately, the current organization of Army personnel support is very complex and confusing. Hopefully, the Army transformation will streamline and simplify the personnel support organizations. Individuals providing personnel support exists in many types and many levels of the organization. There are individuals performing personnel staff-related functions assigned to typical Army organizations, individual units performing only personnel-specific functions, and units only providing command and control for the personnel-specific units. Along with the Army itself, personnel organizations could definitely use some restructuring.

As a starting point, it is important to know how current Army personnel organizations are doctrinally located on the battlefield. During deployments, personnel organizations are located at almost every level of the battlefield. Personnel organizations are generally located from the theater level down to the battalion level. Figure 5 depicts the typical doctrinal locations of personnel units on the battlefield.¹ The exact number and location of personnel units on the battlefield may be slightly modified based on the mission and the population supported. An explanation of the military topographic symbols corresponding to those in Figure 5 is at the Appendix.

¹ United States Department of the Army, *Field Manual 12-6, Personnel Doctrine* (Washington, D.C.: Government Printing Office, September 9, 1994), II-2.

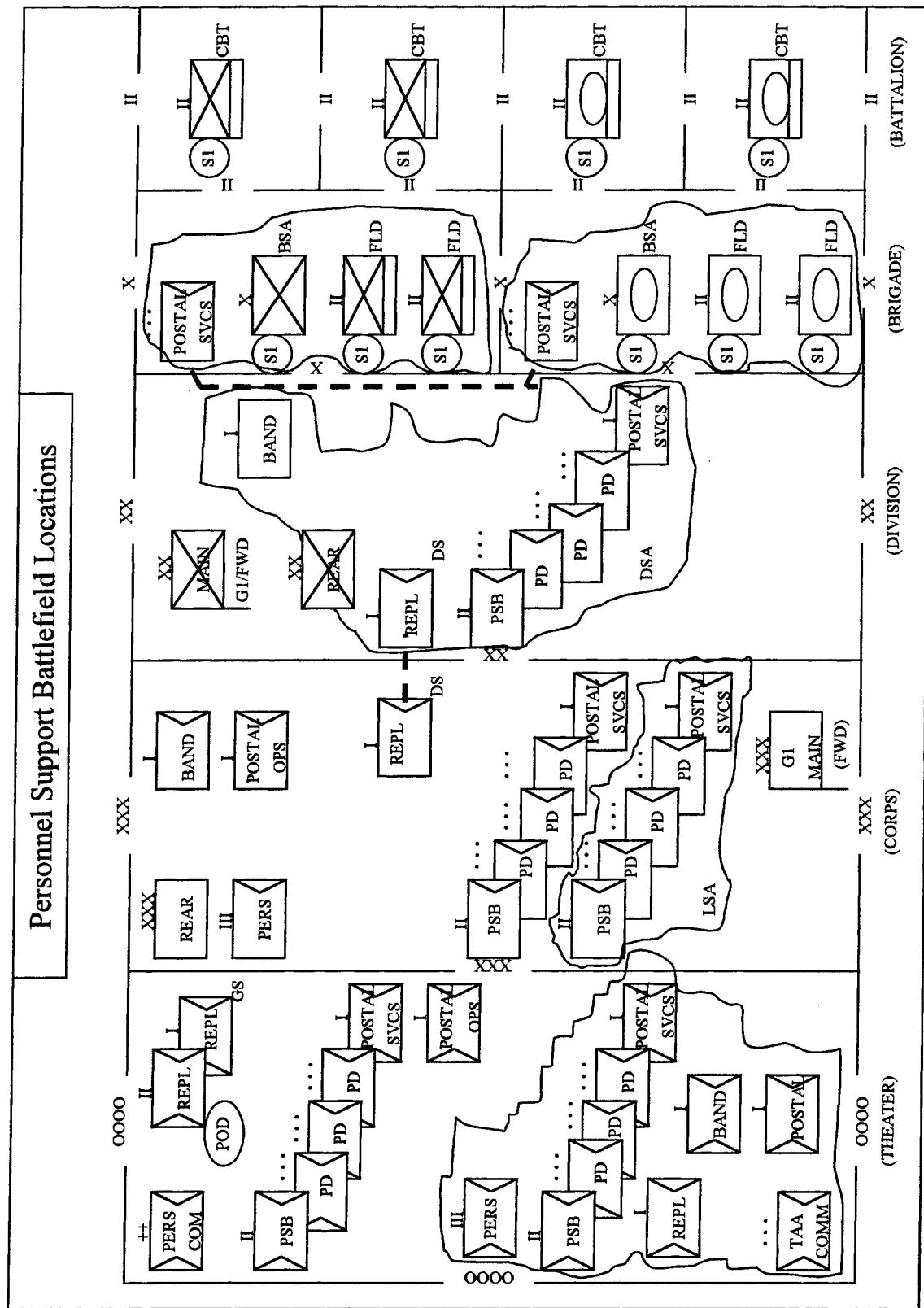


Fig. 5. Personnel support battlefield locations.

Unfortunately, the written description of personnel units is almost as detailed as its graphic representation. In any case, I will describe them, beginning at the top. Headquarters, Department of the Army (HQDA) is the highest-level headquarters of the U.S. Army. It exercises directive and supervisory control. HQDA is composed of the Office of the Secretary of the Army, the Office of the Chief of Staff of the Army, the Army Staff, and specifically designated staff support agencies.² The personnel staff agency for HQDA is the U.S. Army Total Army Personnel Command (USTA PERSCOM), in Alexandria, Virginia.

Below HQDA level, the current Army personnel structure is divided into three areas: (1) personnel management centers (PMC), (2) operational personnel units, and (3) personnel command and control units.³ Personnel organizations in each of these areas are structured differently, and they perform different functions. As the Army changes, change will come to all three of these areas.

Personnel Management Centers

The first area of the three types of personnel support organizations is the personnel management centers (PMC). Doctrinally, "the PMC is a task-organized, functional area staff element at battalion, brigade, division, corps and theater Army level" which performs manning functions described in the Army's operations manual, Field Manual 100-5.⁴ I will briefly describe each of the levels of PMC support, beginning with the lowest level.

² "About HQDA," November 15, 2000 <<http://www.hqda.army.mil/>>, 1.

³ United States Department of the Army, II-1.

⁴ Ibid.

At the lowest level of PMC is the battalion adjutant, or S1. The S1 is the battalion commander's principal staff officer responsible for personnel support.⁵ The battalion S1 has a support section divided into three major elements: unit support, legal support, and personnel support.⁶ Unit support usually consists of programs such as morale, welfare and recreation (MWR); alcohol and drug abuse prevention and control; equal opportunity; and safety. Legal support is normally one NCO who assists the battalion commander in the administrative details of legal matters. Personnel support consists of promotions, awards, evaluations, and other related administrative tasks involved in taking care of soldiers.

Personnel working in the S1 section are normally of personnel related military occupational specialties (MOSs). Strangely, it is usually rare to find a battalion S1 that is an officer from the Adjutant General (AG) branch specialty, where the officers at the others levels of the PMC organizations are normally from the AG branch.⁷ The battalion S1 section is normal the most critical in providing personnel support, since this is where the soldiers have the most direct interface with personnel support functions.

The brigade S1 is the second level of PMC organizations. At brigade level, the S1 normally consolidates personnel information from the battalions to provide the brigade commander an overall picture of the personnel in the unit. The brigade S1 performs the same functions as the battalion S1, only at a higher-level unit.

The third level of PMC organizations is the division G1. Like the S1 at the battalion and brigade levels, the G1 is the primary personnel staff officer for the commanding general

⁵ Army staff sections are designated as follows: S1 is the Adjutant, S2 is the Intelligence Officer, S3 is the Operations and Training Officer, and S4 is the Supply Officer. Occasionally, there is also a S5, Civil Military Operations Staff Officer.

⁶ United States Department of the Army, 10-1.

⁷ The Adjutant General (AG) branch officers are the Army's personnel specialists.

of the division. During peacetime, the G1 is also normally dual-hatted as the Installation Adjutant General (AG), earning the designation G1/AG. The Installation AG title reverts to another officer upon deployment of the division. The division G1 section is made up of a plans officer and two branches: personnel readiness and personnel operations.⁸ Personnel readiness management generally consists of function related to personnel accounting and strength reporting. The Personnel Operations Branch usually handles casualty management, postal operations, the MWR program, and essential personnel services.

At the fourth level of PMC organizations, the corps level, there is two positions.⁹ The first is the Corps G1, who serves as the principle personnel staff officer to the Corps commander. This involves preparing personnel estimates and making recommendations regarding personnel issues in the command. The second is the Corps AG/personnel group commander, who generally directs systems and support activities. It is somewhat difficult to precisely delineate the responsibilities of both positions. With advances in technology increasing the flow of information, it may be possible to combine these positions in the future.

The final level of PMC organizations, the theater level, also has two positions. The first position is the theater deputy chief of staff for personnel (DCSPER). The DCSPER establishes theater personnel policies, prepares plans, and assists the Army component commander in determining the theater command climate.¹⁰ The second position is the theater adjutant general (AG). The theater AG manages personnel support networks and

⁸ United States Department of the Army, 12-2.

⁹ Ibid, 13-1.

¹⁰ Ibid, 14-1.

collects and summarizes personnel information. Again, as with the corps, future advances in information technology might make it possible to eventually combine these positions.

Operational Personnel Units

The second of the three major areas in personnel organizations is the operational personnel units. These are the individual units comprised of soldiers of personnel service MOSs. These units include: postal companies, replacement battalions, Continental United States (CONUS) replacement centers (CRC), reception battalions, and Army bands. The function of each of these units is self-explanatory from their titles.

Personnel Command and Control Units

The third major area of the personnel support structure comprises the personnel command and control units. Below HQDA, there are three levels. From highest to lowest, these three levels are: the theater personnel command (PERSCOM), the personnel service battalion (PSB), and the personnel detachment (PD).

The theater PERSCOM exercises command and control over theater-level personnel units.¹¹ The theater Adjutant General (AG) also serves as the theater PERSCOM commander. Assuming that a corps-sized joint task force may be the largest sized force

¹¹ Ibid, 22-1.

deployed in the future, and with the increasing capabilities of split-based operation, it may be advisable to eliminate the theater PERSCOM in the future. Units can simply communicate personnel information back to CONUS from the corps level, or lower. This could help to reduce the logistics footprint within theater.

The level below the theater PERSCOM is the personnel services battalion (PSB). The PSB may exercise command and control of between two and six personnel detachments.¹² Additionally, the PSB may exercise command and control over a replacement company, postal units, and an Army band. A lieutenant colonel normally commands and PSB, but the commander has no staff to speak of.

The lowest level of personnel command and control units is the personnel detachment (PD). The PDs "collect, validate, process, and manage combat essential information; manage critical personnel systems; and provide essential services to commanders, soldiers, deployed civilians, and joint or allied personnel."¹³ A captain normally commands a PD, and he has no staff, either. The commander may also assume operational control over postal platoons and replacement detachments located nearby.

The PD has four elements: (1) a detachment headquarters, (2) a personnel information section, (3) a personnel systems section, and (4) a personnel services section.¹⁴ The detachment headquarters provides the command and control element for the other three sections. The personnel information section performs personnel information management and personnel evaluations functions. The personnel systems section performs personnel

¹² Ibid, II-2.

¹³ Ibid.

¹⁴ Ibid, 20-5.

database management. The personnel services section handles casualty operations, identification documents, officer procurement, promotions and reductions, and other soldier actions.

Doctrinally, a PD can support a brigade-sized task force of about 6,000 soldiers.¹⁵ But support can be further broken down. Each of the four sections of the PD has three teams. Upon deployment, the PD commander can combine a team from each section to form a cohesive support team capable of providing support to up to 2,000 soldiers and civilians.¹⁶

However, in my experience, the PD structure lacks adequate depth. In most cases, there are only one or two clerks per section. If the PD must support a deployment, as well as continue to provide home base support, it proves to be severely undermanned. Additionally, the PD "has little organic support capability and therefore must draw transportation, communications, food service, DS maintenance, and religious, health service, finance, and legal support from the principal unit in the area supported."¹⁷ The PD must beg, borrow or steal what it requires to maintain itself. In effect, instead of enhancing the combat capabilities of the force, the PD becomes a drain on the resources of the brigade it supports. The Army needs to provide the personnel detachments with the organic equipments it requires to perform its wartime mission. Organic transportation assets for the PD appear to be a particular concern.

Another concern about the concept of the personnel units is that they doctrinally follow the concept of area support versus unit support. I believe that the concept of area

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ Ibid, 20-6.

support is no longer valid with developing trends in the Army. Unit support would allow better personnel support on the increasingly agile combat units. It would also help to reduce the logistics footprint, and could provide better security for the personnel unit. I believe that it may now be better to directly link a PD to a combat brigade. Logistical units normally follow this train of thought. There are forward support battalions (FSB) that form habitual links with supported brigades. Personnel support should be no different. The RMA may also drive changes to personnel functions, as well as the personnel unit structures.

CHAPTER 4

Impact of the RMA on Personnel Functions

Regardless of the exact outcome, it is certain that the RMA will have great impact upon the structure of the Army. This, in turn, will drive changes to its support functions, such as personnel support. U.S. Army Doctrine divides personnel support into eight critical systems, or functions: (1) personnel readiness management; (2) personnel accounting and strength reporting (PASR); (3) casualty operations management; (4) replacement management; (5) personnel information management; (6) postal operations management; (7) morale, welfare, recreation and community support functions; and (8) essential personnel service functions.¹ While the Army may accomplish these personnel systems or functions by other methods as a result of the RMA, the essential requirement to perform these functions should remain. In this section, I will briefly discuss each of these eight critical systems, some current concerns on the functioning of each system, and some of the changes that the RMA may bring.

¹ United States Department of the Army, *Field Manual 12-6: Personnel Doctrine* (Washington, D.C.: Government Printing Office, September 9, 1994), I-1.

Personnel Readiness Management

The first critical system is personnel readiness management. In the condensed version, it is assigning soldiers to the units where they are most needed. Officially stated, “the mission of the personnel readiness management system is to distribute soldiers and Army civilians to subordinate commands based on documented manpower requirements or authorizations and the commander’s priorities.”² USTA PERSCOM, in coordination with the various Army units, determines which upcoming vacancies within the units are valid requisitions, and assigns soldiers of the appropriate grade and skill to those positions.

During deployment, specific procedures for accomplishing this task may change, but the core requirement to complete the task is the same. Upon deployment, personnel readiness managers within theater establish a system of reports: the personnel summary, personnel requirements report, and the task force summary. These reports indicate the grade level and skill of vacancies to the unit. Commanders can then determine where to send replacements based on unit needs and the priorities of the commander.

Information flow is a key component of the process, and therefore a key vulnerability. Commanders must know which vacancies exist, and who is inbound to fill those positions. Protection of communication and computer database assets from information warfare will be a primary concern with the RMA.

² Ibid, 1-1.

Personnel Accounting and Strength Reporting

The second critical personnel system is personnel accounting and strength reporting (PASR). By definition, "the mission of the Army's PASR system is to account for soldiers and Army civilians; report other strength related information, such as duty status, unit of assignment, and specialty code; and update command data bases at all levels."³ The PASR system consists of two parts. The first part is personnel accounting. This is the by-name accounting for soldiers and civilians, to include important information about their duty status. Secondly, strength reporting is the numerical end product of this accounting process as it relates to unit strength.

Company commanders account for their soldiers and report the information to the battalion. The battalion adjutant, also called the S1, enters the information into the database by a Standard Installation Division Personnel System (SIDPERS) transaction. SIDPERS is the standard database utilized by the Army to maintain most all personnel records. It is at this point where the data converts from verbal or manual to an automated format. The Command and Control Strength Reporting System (C2SRS) software within the personnel system produces the automated reports used at higher levels of command to determine unit personnel strength.

The digitization of the battlefield occurring with Force XXI may change all of this complex reporting process. Soldiers are being linked together, and information on their

³ Ibid, 2-1.

status is more easily attained. Soon, the location, strength and equipment status of units may be available at the touch of a button for staffs and commanders.⁴

As with all other personnel functions, PASR is particularly susceptible to information warfare. Such databases and communications networks must be protected. If automated systems fails, units can prepare manual reports within theater, but this is an inherently slower process.

Casualty Operations Management

The third critical personnel function is casualty operations management. It includes such tasks as casualty reporting, casualty notification, casualty assistance to next of kin, line-of-duty determination, reporting the status of remains, and casualty mail coordination.⁵ The process during wartime is both by manual and automated systems. Units immediately report casualties to battalion on the Witness Statement/Casualty Feeder Reports (DA Forms 1155/1156).⁶ Units should not delay sending the initial report, even if complete information about the incident is not available. The battalions may then submit these reports to any PSB on the battlefield. Information is then further passed up the chain as expeditiously as possible.

⁴ Robert L. Bateman III, "Pandora's Box," in *Digital War: A View from the Front Lines*, ed. Robert L. Bateman III (Novato, CA: Presidio Press, 1999), 16.

⁵ United States Department of the Army, 3-1.

⁶ Ibid.

Casualty operations are very time-sensitive, and precision is required. There is very little room for error when notifying a family that their son or daughter is dead.

Technological advances in communication brought about by the RMA may greatly assist in this critical personnel function. Information flow for this function is critical, since "information flows up, across, and down the reporting chain to help account for soldiers and reportable civilians."⁷

Casualty operations require close coordination between personnel, medical, logistical and provost marshal communities.⁸ Unfortunately, there is not automated interface between any of these communities at present. Perhaps advances in information technologies can help establish this link.

Technological changes greatly improve accuracy and speed in the area of casualty operations. Recent deoxyribonucleic acid (DNA) sampling of service members should provide for more accurate and timely identification of remains in the future, possibly reducing systems requirements. The Army has also been experimenting in the Land Warrior system. This system provides better communications, and increases battlefield awareness. It may be possible to place a locating sensor in this system, allowing commanders to know if a soldier has been killed or wounded, and also the exact location of the soldier. This could greatly increase accountability.

⁷ Ibid, 3-2.

⁸ Ibid, 3-1.

Replacement Management

The fourth critical personnel system deals with the flow of replacements to units. "Replacement management is the physical reception, accounting, processing, support, reequipping, training, and delivery of military and civilian personnel."⁹ This includes not only replacements, but also return-to-duty (RTD) soldiers from medical treatment facilities.

The Army's current replacement system is based on individual, versus unit, replacements. This makes the flow of replacements somewhat more complicated. Presently, replacement go through a CONUS Replacement Center (CRC), where they are issued personal weapons, chemical defense equipment, and organizational clothing.¹⁰ From the CRC, replacements flow to the theater personnel replacement battalion (PRB). From the PRB, replacement can go to either the corps or the division. The corps or division then decides which units need them, based on PASR and the commander's priorities, and transports them to the unit that needs the replacements the most.

Information flow in the replacement process is also critical to its performance. "The replacement management network requires real-time access to basic information about all replacements and their movement status from the point of selection to final destination."¹¹ The requirement for transporting replacements flows from higher to lower units, i.e., the unit that has custody of the replacement soldiers must get them to the designated subordinate unit.

⁹ Ibid, 4-1.

¹⁰ Ibid, 4-3.

¹¹ Ibid, 4-10.

But, the unit must know where the subordinate unit is located, and to be able to coordinate with it for transportation.

The RMA may assist in this process by providing better communications and automated systems capabilities. The opposite may also hold true, in that these systems may become more vulnerable to attack. At a minimum, communication and automation systems will become a more tempting target for U.S. adversaries.

Another possibility is that the replacement function may change as the forms of warfare change. The Army may have to switch from the current individual-based replacement system to a unit-based replacement system. If this happens, when a brigade becomes non-mission capable, the Army can simply replace the entire brigade. This switch would not be due to anticipated attrition, but in order to maintain a high tempo of operations.¹² Some military writers see the policy of individual replacements as the source of many problems for the Army in the past. Some view the lack of unit cohesion caused by the policy of individual replacements as the chief problem faced by the U.S. Army in the Second World War and in Korea.¹³ Because of this policy, "the U.S. Army infantryman often went into battle in the company of strangers."¹⁴

Because of increasing combat capabilities from technological advances, future wars may tend to be very quick, "come as you are" affairs. There may not be time to establish and effectively operate an individual replacement system. The conflict could be over by the time this occurs.

¹² James R. Blaker, "The American RMA Force: An Alternative to the QDR," *Strategic Review* XXV, no. 3 (Summer 1997): 23.

¹³ John A. English and Bruce I. Gudmundsson, *On Infantry: Revised Edition* (Westport, CT: Praeger Publishers, 1994), 150.

¹⁴ *Ibid.*

Personnel Information Management

The fifth critical personnel system is the personnel information management system.

“The mission of the personnel information management system is to collect, validate, process, and store critical information about soldiers, Army civilians, and units.”¹⁵ The Army maintains personnel information in order to assist commanders in decision-making, retain historical information, and to support policy and personnel management decisions at Department of the Army (DA) level.¹⁶

The Army maintains personnel information for active duty soldiers in two forms: manual and electronic. The manual forms of records are the official military personnel file (OMPF), maintained at HQDA, and the military personnel records jacket (MPRJ), maintained by the local, servicing personnel detachment.¹⁷ Standard Installation Division Personnel System (SIDPERS) is the electronic personnel database maintained for active duty soldiers. Officers also have the Total Officer Personnel Management Information System (TOPMIS), which maintains additional fields of personnel information, such as previous duty assignments. There is also another database for enlisted soldiers: the Enlisted Master File (EMF).

If keeping personnel records is complicated in peacetime, it becomes even more difficult during times of deployment. SIDPERS exists in different versions for active Army,

¹⁵ United States Department of the Army, 5-1.

¹⁶ Ibid.

¹⁷ Ibid.

Army National Guard (ARNG), and also for the U.S. Army Reserves (USAR).¹⁸

Additionally, there is a separate database for civilians, the Army Civilian personnel System (ACPERS).¹⁹ All of these databases must be converted and entered into the active Army version of SIDPERS, causing delays and frustration. The only positive aspect is that the SIDPERS database is reduced during wartime, only maintaining minimal, essential information. This wartime version of SIDPERS has the capacity to manage about 120,000 records on one Tactical Army Combat Service Support Computer System (TACCS) computer.²⁰

According to Moore's Law, off-the-shelf computing power doubles approximately every eighteen months.²¹ If this theorem holds true, computer advances in the forthcoming RMA should be able to produce great advances in managing this personnel database in the coming years. The Army desperately needs to standardize all of these personnel databases, especially between the active and reserve component. If a common database is not possible, the different versions should at least be compatible where personnel specialists can transfer data to the active component version.

Also creating confusion upon deployment is the fact that there are different systems utilized during peace and wartime. During deployment, Mobile Subscriber Equipment (MSE) will be the primary mode of external communication for personnel units.²² Unfortunately, day-to-day personnel operations make it difficult for personnel specialists to

¹⁸ Ibid, 5-4.

¹⁹ Ibid.

²⁰ Ibid, 5-7.

²¹ Bill Owens and Ed Offley, *Lifting the Fog of War* (New York: Farrar, Straus and Giroux, 2000), 66.

²² United States Department of the Army, A-1.

take time out to train on such equipment. Very few other soldiers must operate completely different during wartime versus peacetime. Personnel specialists need to be able to "train as you fight." Perhaps improvements in computers and communications technology may vastly improve to the point that it becomes unnecessary to alter personnel support functions during deployment in the future.

Hopefully, computer advances brought about by the RMA will greatly assist in managing personnel databases. Increased storage capacity may enable the entire database for a brigade, or other unit, to be on a single laptop, or on another form of computer. Increased communication abilities may allow minimal deployment of personnel support, decreasing the tooth-to-tail ratio. The Army utilized such split-based operations in the Gulf War, and this may be the wave of the future. However, such operations are totally dependent on secure communications for both voice and data.

If much of personnel support does not have to deploy, it may be easier to convert all personnel to joint²³ functions, and to even make much of it civilian employees. All services require the same basic functions from personnel support. Making personnel support joint may help to reduce redundancies and inefficiencies, and reduce costs. Unfortunately, many of the technical aspects of personnel functions are completely different among the services. This is especially evident when comparing the promotion and evaluation systems. But, this could possibly change.

Technological advances with the RMA may assist in other ways. Currently, the Army produces a manual deployment record from the MPRJ. Formerly called the Preparation for Overseas Movement (POM) Packet, the Army now generally refers to this

²³ "Joint" refers to all of the armed services: Army, Navy, Air Force, and Marine Corps.

reduced form of a manual personnel as the Soldier Readiness Packet (SRP). The deployment record includes an emergency data record, the life insurance form, and a single-sheet summary of personnel information. There is some discussion that all of this information may be stored on an identity card with a bar code, magnetic strip, or a memory chip.²⁴ Such a card might even be able to hold medical records. Such a system could greatly increase efficiencies in personnel information management.

Postal Operations Management

The sixth critical personnel system is postal operations. For the Army, postal operations involve two functions: processing mail and providing postal services. Processing mail involves: "receiving, separating, sorting, dispatching, and redirecting ordinary and accountable mail, conducting international mail exchange, handling casualty and enemy prisoner of war (EPW) mail, and screening for contaminated/suspicious mail."²⁵ While providing postal services involves: "selling stamps; cashing and selling money orders; providing registered (including classified up to secret), insured, and certified mail services; and processing postal claims/inquires."²⁶

During deployments, postal operations play a vital role in supporting morale. But as the Army witnessed in the Gulf War, providing postal support can quickly become a

²⁴ Ibid, 27-2.

²⁵ Ibid, 6-1.

²⁶ Ibid.

daunting task. The normal requirement for supporting a deployed force is one postal operations platoon for up to 36,000 soldiers and civilians, a postal services platoon for up to 6,000 soldiers and civilians, and a postal company headquarters for every three platoons.²⁷ "The current planning factor for incoming mail is 1.5 pieces and/or 1.34 pounds per soldier per day."²⁸

Unfortunately, there are a limited number of postal units available for deployment in the active component. Large-scale or long-term deployments will require support from the Reserves. Another possibility is privatizing postal support under civilian contract. There is no reason why civilians could not perform this function.

Postal operations require secure communications. Advancements in RMA may assist in this regard, but may not provide much other assistance in streamlining postal service. There will always be a need for postal support in theater. Soldiers will always desire packages and mail from home.

Morale, Welfare, Recreation and Community Support Functions

The seventh critical personnel support system is Morale, Welfare, Recreation (MWR) and community support. There are several facets, and many organizations involved in this system. The mission of the MWR program is "to improve unit readiness by promoting fitness, building morale and cohesion, enhancing quality of life, and providing recreational,

²⁷ Ibid, 6-8.

²⁸ Ibid.

social, and other support services for soldiers, civilians, and their families.”²⁹ More specifically, MWR provides such things as unit recreation kits, library book kits, recreation centers, and other services for deployed soldiers.

Community support programs include the American Red Cross (ARC), family support, and the Army and Air Force Exchange System (AAFES). The ARC provides emergency communication and case management services during mobilization and deployment. AAFES support provides for the basic health, hygiene, and personal care needs of deployed personnel.

Exchange support during deployment occurs in phases. The first phase of AAFES support is health and comfort packs (HCP). The Army transports HCPs as a part of the unit’s basic load, and they are designed to last through the initial weeks of deployment. The second phase is normally in the form of AAFES Imprest Fund Activities (AIFA). For an AIFA, the unit appoints an individual who is responsible to operate the facility. AAFES issues initial funds to stock the facility, and the unit uses money generated from sales to restock the imprest fund. The last level of exchange support is the Tactical Field Exchange (TFE). TFEs are direct retail operations which are manned by Defense Commissary Agency (DeCA) or detailed military personnel. Such support may also include barber and food facilities.

It is unlikely that the restructuring of the Army because of the RMA will have any impact on MWR and community support. Ground forces will still have to deploy, and they will need health care products, and morale building activities within theater. Advances in technology will not eliminate these needs.

²⁹ Ibid, 7-1.

Essential Personnel Service Functions

The last category of critical personnel support is a catch-all category of essential personnel service functions. These are the actions that most people typically associate with personnel support. They include: "awards and decorations, noncommissioned officer and officer evaluations, enlisted promotions and reductions, officer promotions, enlisted and officer transfers and discharges, identification documents, leaves and passes, line of duty investigations, officer procurement, retention, recruiting, and reclassification."³⁰

If approved at high levels, many of the standards in carrying out some personnel actions change during wartime. Specifically the standards for evaluations, promotions, and awards are the ones that typically change during wartime. For example, awards and evaluations could be hand-written, and the Secretary of the Army may delegate approval authority for personal awards. This greatly disrupts personnel support, as the units must conform to the changing guidance. Perhaps with future improvements in communications and computer technology, and/or because of increased use of split-based operations, the Army may not have to change submission standards on many personnel functions. The exact changes in personnel support are difficult to project. But, they are likely to include an increase in automation, an increase in joint-oriented services, and be more home-based.

³⁰ Ibid, 8-1.

CHAPTER 5

Conclusion

It is difficult to accurately plan future personnel support for the U.S. Army when the Army itself is not certain how it will restructure at this point. The revolution in military affairs will necessitate changes in the Army. Changes in the Army will require changes in support functions. However the force structure evolves in the future, the personnel system must also evolve in order to support the needs of the Army.

My proposals are based on some common themes proposed about the future structures of the Army and my personal beliefs on how personnel support should function. Because of this, I may raise more issues of concern in this paper than I actually provide answers for. I will first discuss the impact of these changes on the structure and functions of personnel units. I will then discuss general concerns on personnel support brought about by the revolution in military affairs.

One of the primary concerns for the personnel community should be in maintaining adequate support during the transition process to a future force. How can the personnel community support the three differently organized forces (the objective, interim and legacy) under General Shinseki's plan? The answer lies in looking for commonalities. The current and interim forces consist of brigades. Most of the proposed structures for the future Army are based around a brigade-sized task force of approximately 4,000 to 6,000 soldiers. General Shenseki's plan calls for a brigade-sized combat force, as well as Douglas

Macgregor's. The brigade appears to be the basic building block for the future force, regardless of what structures may exist above it.

In keeping with this line of thinking, the Army should organize personnel support into modular packages designed to support individual brigades, or brigade-sized task forces, as opposed to providing area support. In a hierarchical organization such as the Army, the concept of area personnel support is ineffectual. The habitual association of personnel detachments with combat brigades may improve support to the brigade, and also improve the life support and defense of the personnel detachment.

In a similar fashion, the Army could assign the personnel service battalion to the division. It could fall under command and control of the division support command (DISCOM) with all the other logistics and support functions, as it normally falls during peacetime. But assignment or attachment to the division is not the only alternative. Many scholars argue that the RMA will drive a "flattening" of army structures, eliminating layers of middle management.¹ Some, such as Macgregor, envision the disbanding of divisions as part of this flattening process. Should this occur, the next higher echelon unit would still need to perform critical personnel functions. For Macgregor's plan, this would be at the level of the corps-sized joint task force. The PSB could be similarly assigned to this unit, maintaining a habitual support relationship during both peace and war.

Under either proposal it may be possible to further flatten the structure of personnel organizations by eliminating the theater PERSCOM. The PSB, under either the division or the joint task force, could simply transmit personnel data back to the United States, namely USTA PERSCOM. Improved communications processes may make this data transfer nearly

¹ Kapil Kak, "Revolution in Military Affairs – An Appraisal," *Strategic Analysis* XXIV, no. 1 (April 2000): 14.

instantaneous. If necessary, higher echelon units either within theater or in CONUS could simply access the personnel database to monitor unit strength. It may not be necessary to deploy many of the personnel units.

Such split-based operations for personnel support are not revolutionary. Army personnel units provided support in this manner during the Gulf War. The official Army doctrine acknowledges that “[e]nhanced communications allow accomplishment of some personnel functions, such as personnel information management, from CONUS or another theater, requiring deployment of only critical functions.”² Improved communications could mean “virtual” personnel support from CONUS, reducing the “tooth-to-tail ratio of deployed troops. For the United States it means fewer deployed soldiers to provide life support functions for and to protect.

This concept of increasing amounts of personnel support being provided from CONUS, or from out of theater, directly ties in with Admiral Owens’ concept of “homeland support.” Owens inserts another interesting twist into the concept of out of theater support. Under his vision of homeland support:

Administrative and support functions such as personnel management, training, medical support, and maintenance would be organized by the CEOs of the four combat services (the chief of naval operations, the commandant of the Marine Corps, and the chiefs of staff of the Army and Air Force) in the continental United States with *joint* subfacilities at major overseas bases to provide complete support for members of all four services.³

Not only could the armed forces receive personnel support from out of theater, it could also be joint personnel support. The future of warfare requires all service to operate jointly.

² United States Department of the Army, *Field Manual 12-6: Personnel Doctrine* (Washington, D.C.: Government Printing Office, September 9, 1994), I-4.

³ Bill Owens and Ed Offley, *Lifting the Fog of War* (New York: Farrar, Straus and Giroux, 2000), 206.

Steps taken to improve the coordination between services would only improve interoperability. But this concept could be taken still further.

It is conceivable that all personnel service support could be performed jointly. Every service must complete the eight critical personnel functions in one form or another for its members. All soldiers, sailors, Marines and airmen will need identification documents, evaluations, awards, and the other functions that personnel support provides. This consolidation among the services would require a melding of all procedural guidelines for these functions. Some service differences may be too difficult to overcome, such as differences in promotion selection and procedures, but many functions would be very similar.

Such consolidation is not inconceivable. Many such joint functions exist already. All services use the Defense Enrollment Eligibility Reporting System (DEERS), originally a Navy system, for dependent verification for medical support coverage and in issuance identity cards. Also, within the last decade, the Army began using the Joint Uniform Military Pays System (JUMPS), the pay system first utilized by the U.S. Air Force. Other joint personnel functions may soon follow.

But before the Army improves interoperability of its personnel support with other services it should improve the interoperability between its active, reserve, and civilian components. As previously mentioned, SIDPERS exists in different versions for the active Army, Army National Guard, U.S. Army Reserves, and U.S. Army civilians.⁴ The Army should standardize these different personnel databases in order to expedite deployment into theater when the need arises.

The RMA may also drive other internal changes to the personnel support system. There might be MOS consolidations, or realignments. The Army designates military

occupational specialties with alpha-numeric designators. Typical ones for the personnel community are 71L, 75B, etc. Recently, many were consolidated at the higher ranks into 75H, expected senior enlisted to have a grasp over many more functions of personnel systems. With the increasing automation of personnel functions, this may occur at lower and lower ranks, requiring personnel specialists to be able to perform more varied functions. This may require more training, or computer systems that are more user-friendly to operate.

The Army may want to consider other MOS consolidations. I would propose that personnel and finance specialties could conceivably consolidate. Finance draws selected information from the personnel database. It may be possible to form a consolidated database that contains all personal information on an individual soldier. If it proves too difficult to train all personnel specialists on finance functions, the Army could simply add a small finance section to the PD with soldiers trained specifically in the finance field. Both personnel and finance support are already grouped together in the battalion S1 section. Finance and personnel units are also generally collocated. It would only make sense to combine the two functions.

Another change I propose would be to ensure that battalion S1 positions are filled with officers from the Adjutant General branch, the Army's personnel specialists. The S1 position is critical in providing personnel support. If the Army organization flattens, it will become even more critical. More and more functions may fall onto the shoulder of this officer. It is unfair to the officer and to the unit requiring support to place an officer in this position who is not professionally trained in these functions. Unfortunately, the norm is for an officer from another branch to fill this position. The non-commissioned officers (NCO)

⁴ United States Department of the Army, 5-4.

and other enlisted personnel working in the battalion S1 section are usually trained personnel specialists, so why shouldn't the S1 be also?

Another change caused by these changes is that civilians could fill many personnel positions in personnel units. This is especially true for the higher-echelon personnel support units. While civilians have, and do, deploy, it may be better to place soldiers in lower echelon personnel units, such as the PD and PSB. If these units change to become direct support to the brigades and divisions/corps, respectively, they will be closer to the action. Such a proposal to fill more personnel positions with civilians may be more cost effective.

There are even arguments for the privatization of personnel support. But I would personally be hesitant to release control over the database of all soldiers, or possibly all armed forces, of the United States to a civilian firm. A civilian firm may not be able provide adequate security over such information, especially over a long period of time. The contractor might easily go out of business, lose the contract, or misuse the information for personal financial gain.

In addition to possible changes in the structure of personnel support, the RMA is also driving changes which have great implications across the entire range of providing personnel support. Now, and increasingly so in the future, secure forms of communication, for both voice and data, are absolutely essential in the performance of personnel support. This key requirement becomes a key vulnerability in the eyes of potential adversaries of the United States. In fact, information security might be the main center of gravity in future military operations. This falls under the rubric of information warfare (IW), which is "any action

taken to delay, exploit, corrupt or destroy the enemy's information and its functions and protecting (your) own side against those actions.”⁵

Communications and automated systems are becoming increasingly vulnerable to cyber-attack or other forms of information warfare. Many of my proposals call for increased automated interface with different communities in the service, such as medical, finance, logistics, and provost marshal. But such increased interface is not without risk. The more people who can access the database, the less secure it will be. Increased interoperability also translates into increased vulnerability.

At present, the Army personnel community needs to ensure that the SIDPERS, TOPMIS, and EMF databases are secure from computer hackers. Other systems also become critical during deployments. Tactical satellite access, linked with Mobile Subscriber Equipment (MSE) becomes critical for personnel management on the battlefield.⁶ Briefly described,

MSE is a voice and digital communications system that provide common user support to a geographic area, as opposed to dedicated support to a specific unit or customer. Area coverage is accomplished through a series of nodal switches deployed throughout the battlefield that connect fixed and remote users.⁷

FM radio transmission is also critical for voice communications for deployed personnel units. The key system at present to perform this task is the Single Channel Ground and Airborne Radio System (SINCGARS).⁸ The Army must protect all of these critical computer systems.

⁵ Kak, 5.

⁶ United States Department of the Army, A-1.

⁷ Ibid, A-3.

⁸ Ibid, A-6.

The Army has recognized the increasing need to protect both its communication systems and computer databases. It even developed acronyms for both communications security (COMSEC) and computer security (COMPUSEC). Recent changes prove that the Army is considering information security to take a higher priority.

Under OPMS XXI, the Army is already creating new functional areas for officers in the area of information warfare in the career field of Information Operations. It is conceivable that information warfare may become a basic branch within the Army. In fact, the services are already making preparations to field five new reserve component information warfare units during this fiscal year and next.⁹ The services will call these units joint Reserve virtual information operations/information assurance organizations (JRVIOs).¹⁰

The revolution in military affairs will bring many changes to the Army in the coming years. As a result, we can expect its structure to change drastically. This transformation will drive changes to personnel service support structures and functions as well. Changes are coming. It is only a matter of how prepared the Army will be to meet the changes. When I was in training, I was told that there were three ways to do things: "the right way, the wrong way, and the Army way." I can only hope that the Army way turns out to be the right way when it comes to transforming personnel support in the wake of the RMA.


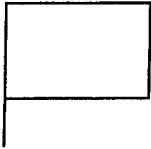

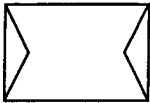

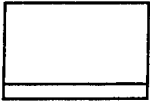
⁹ "Reserve Component Units for Information Warfare," *Army* 51, no. 1 (January 2001): 57.

¹⁰ Ibid.

APPENDIX

MILITARY TOPOGRAPHIC SYMBOLS

TYPE OF ELEMENT

<u>Symbol</u>	<u>Description</u>
	Unit
	Headquarters
	Logistical, medical, or administrative installation
	Combat service support element of a theater army
	Combat service support element of a U.S. corps
	Combat service support element of a U.S. combat unit (brigade trains and below)

SIZE OF UNIT

Symbol

Description

*



Squad

* * *



Platoon or detachment

I



Company, battery or troop

II



Battalion or squadron

III



Group or regiment

X



Brigade

XX



Division

XXX




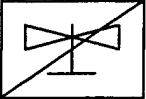



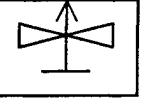
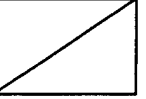

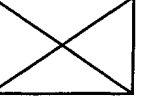
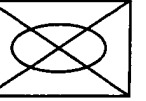
Corps

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Army

UNIT ROLE INDICATOR (SELECTED)

<u>Symbol</u>	<u>Description</u>
	Airborne
	Air cavalry
	Air defense artillery
	Armor
	Armored cavalry
	Attack helicopter
	Cavalry
	Field artillery
	Infantry
	Mechanized infantry

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